

Fig 1B

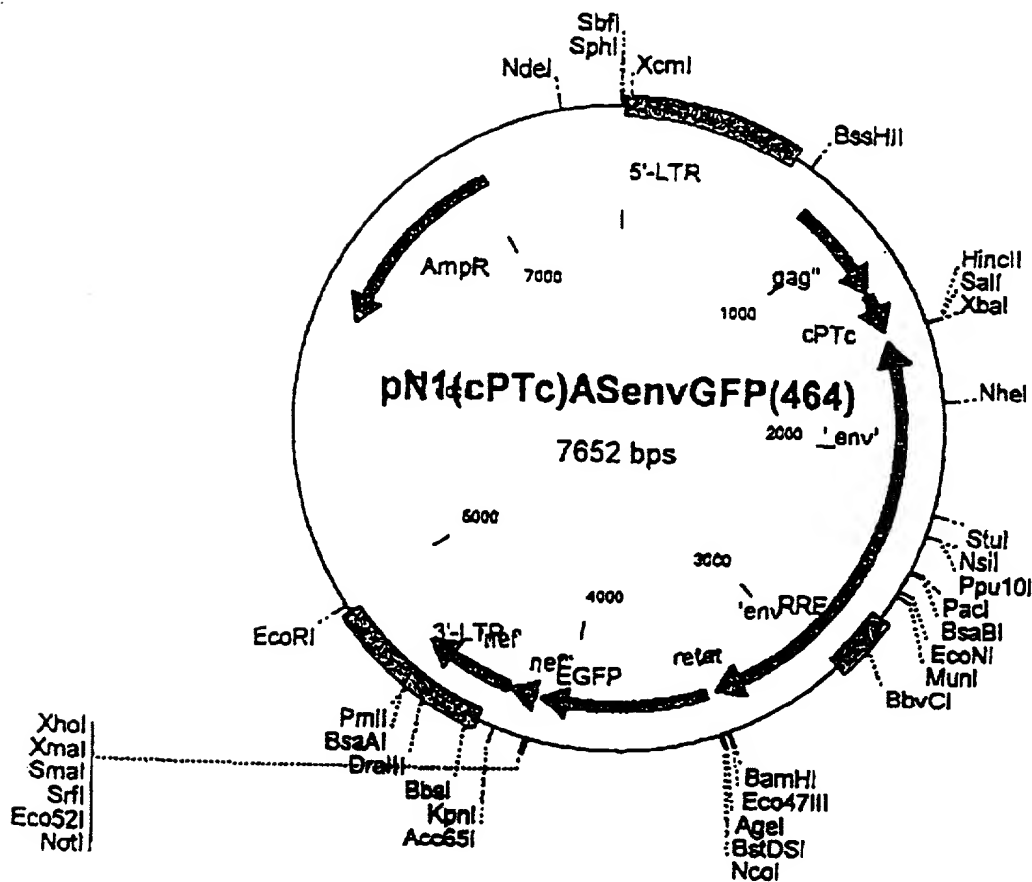


Fig 1C

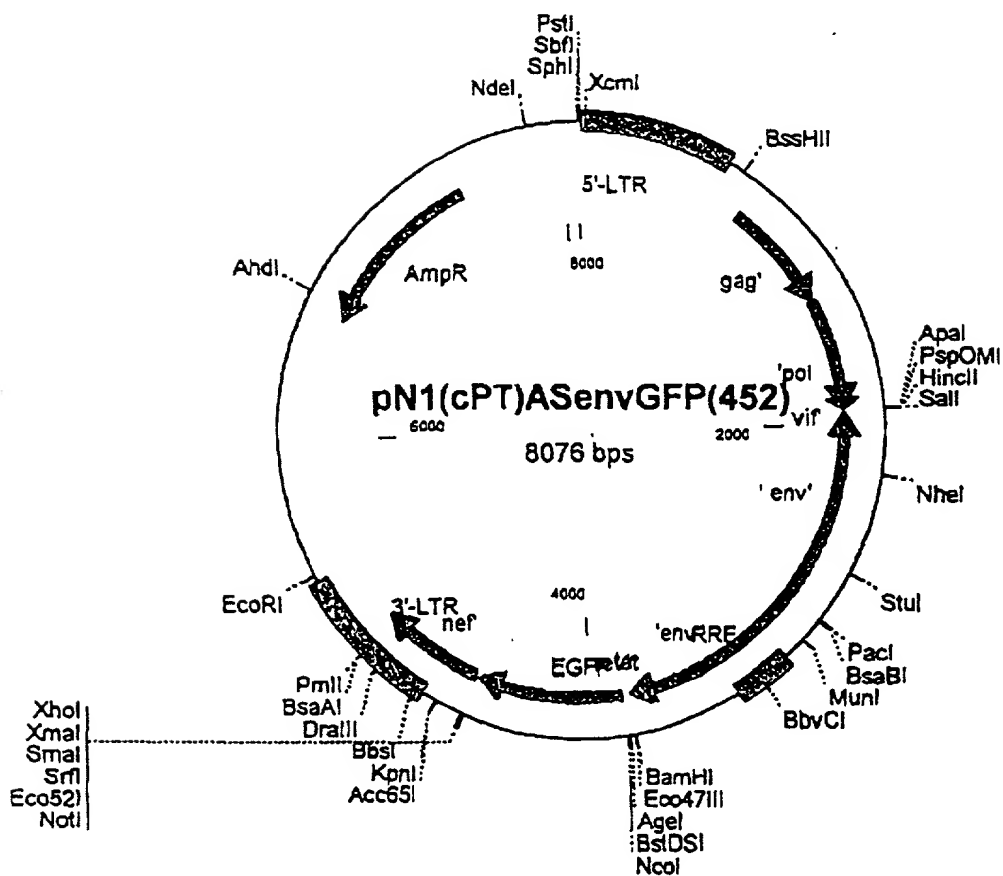


FIG. 1

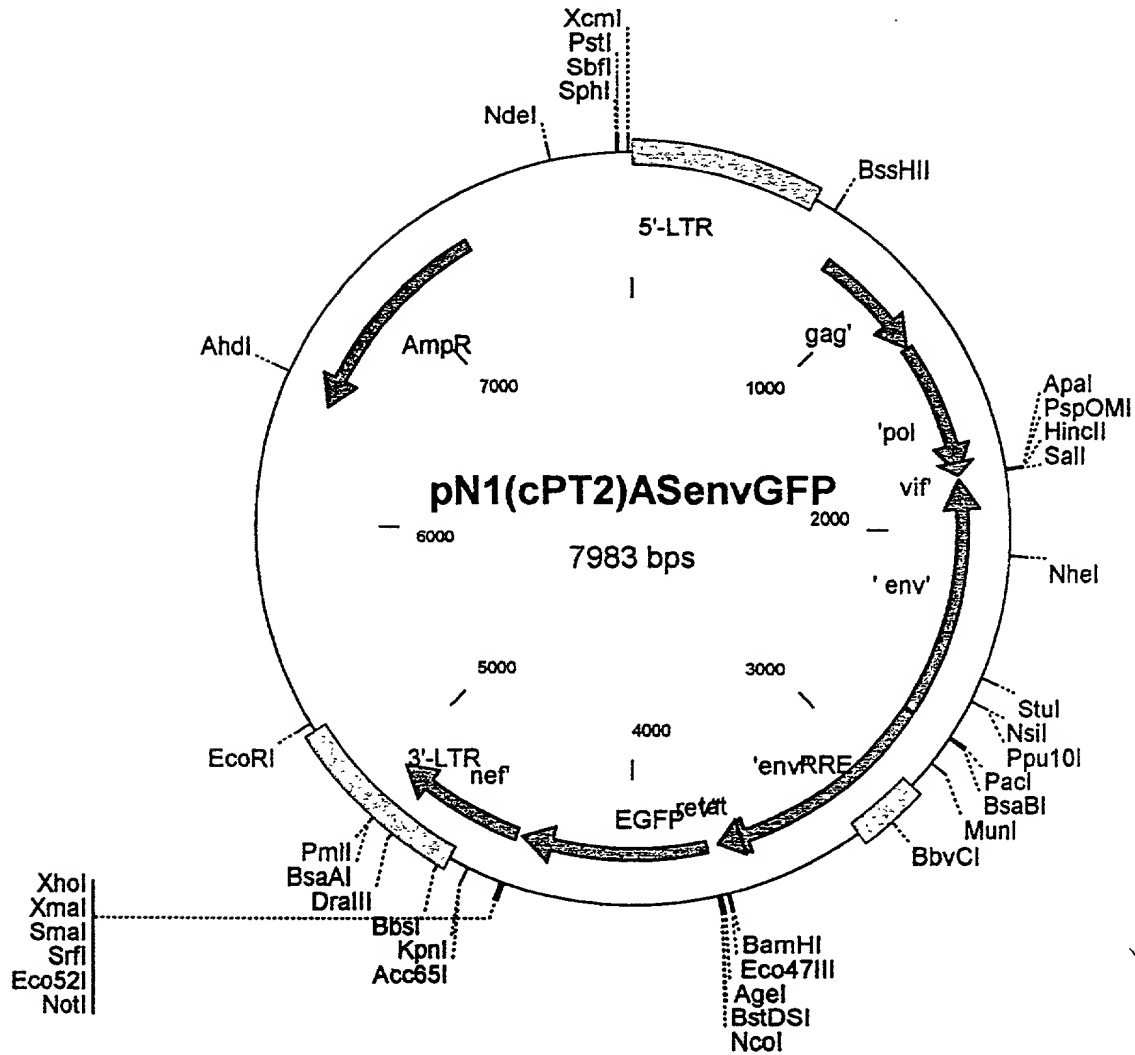


Fig 1E

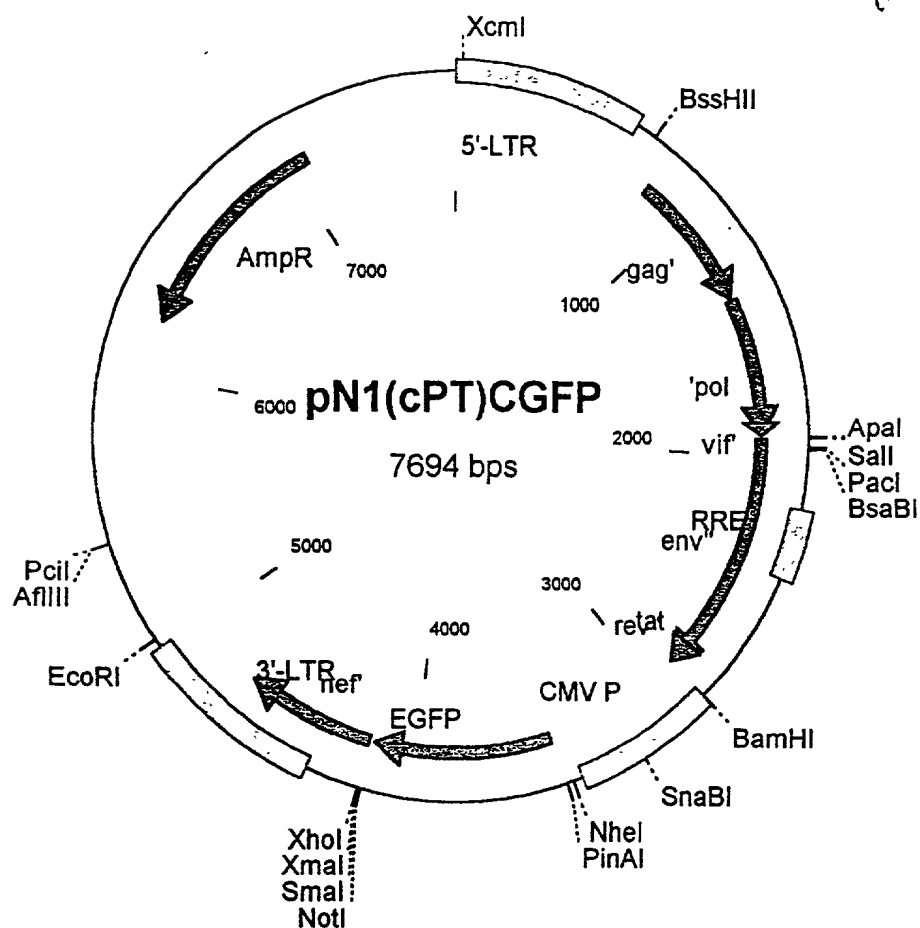


Fig 1F

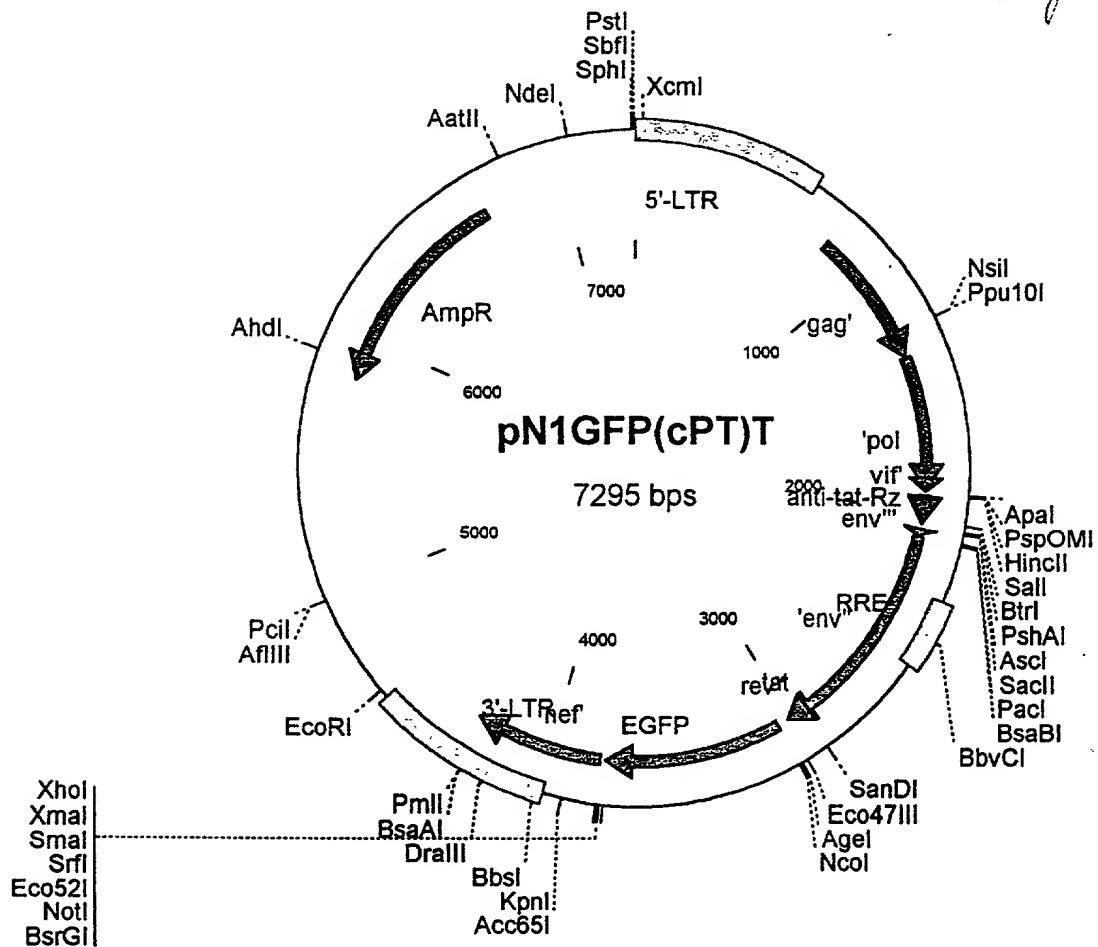


Fig 16

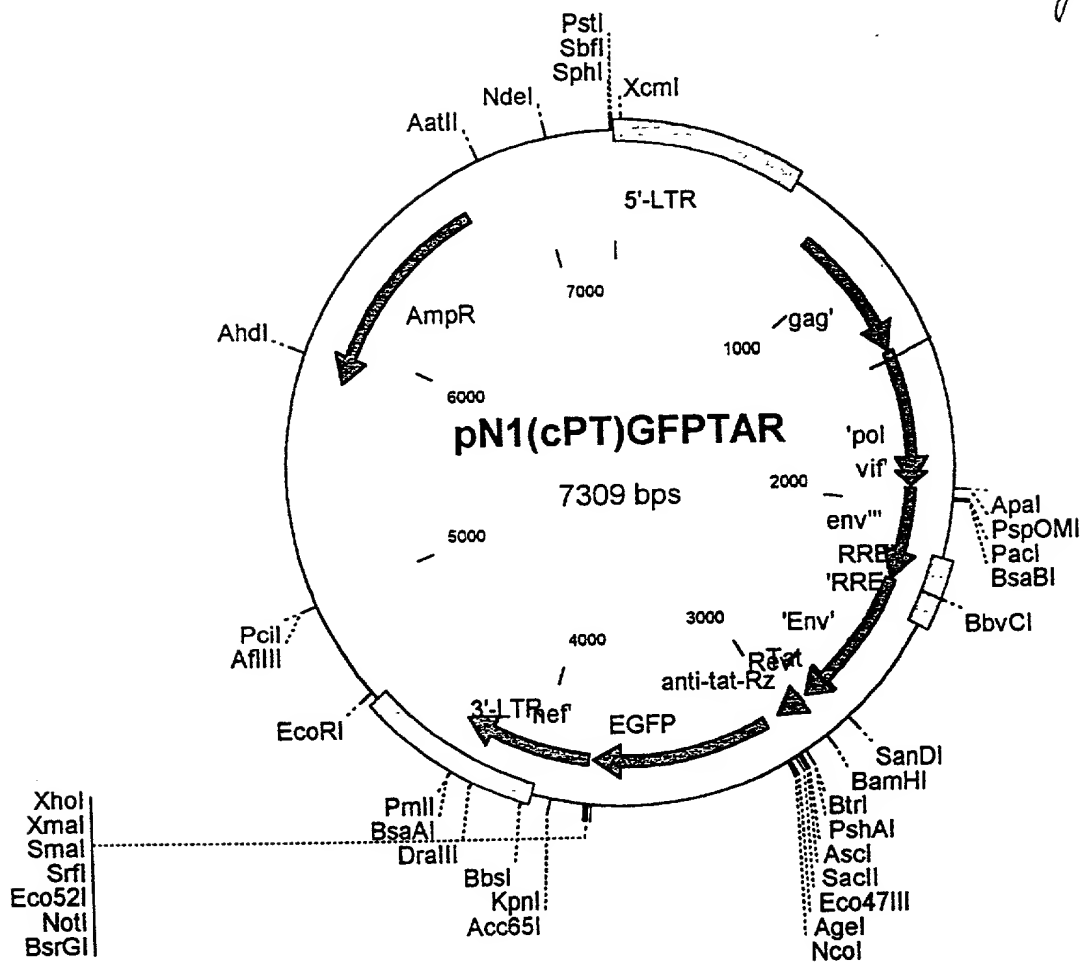


Fig 1H

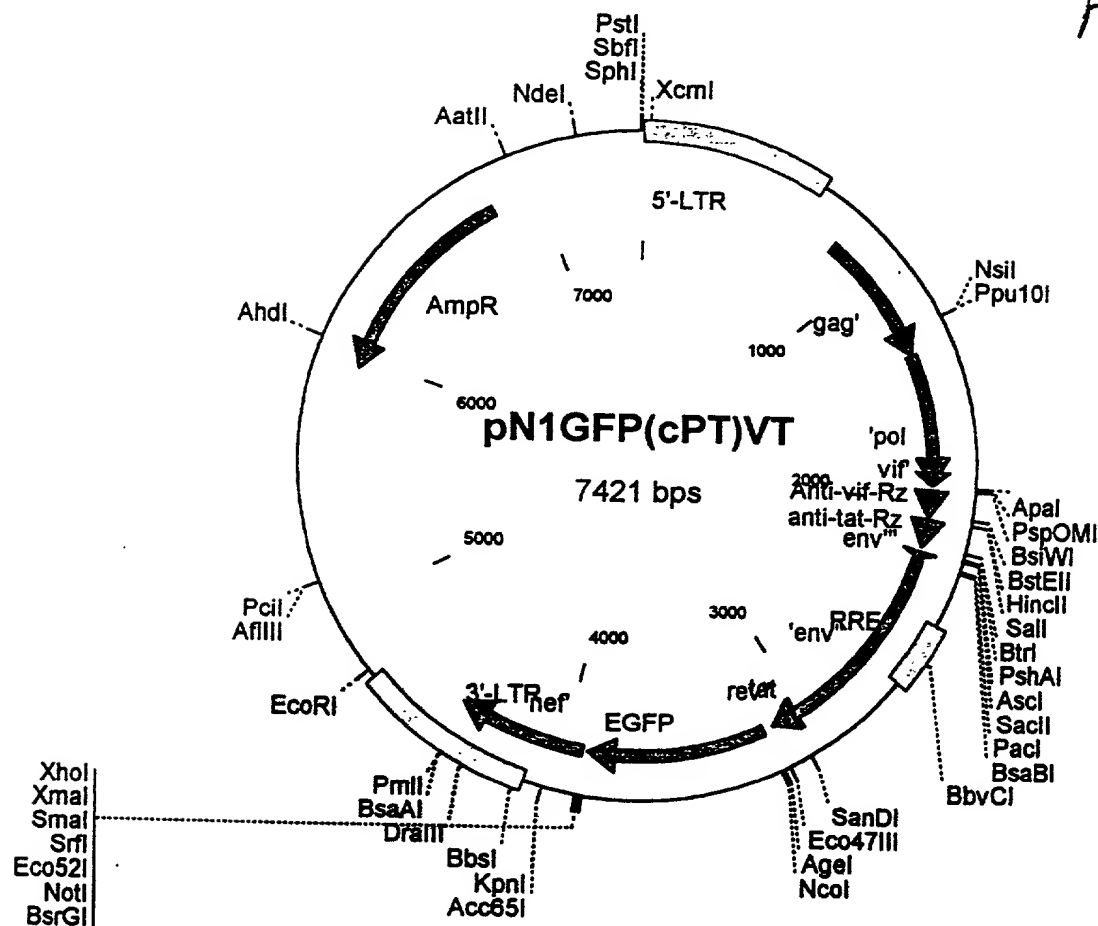
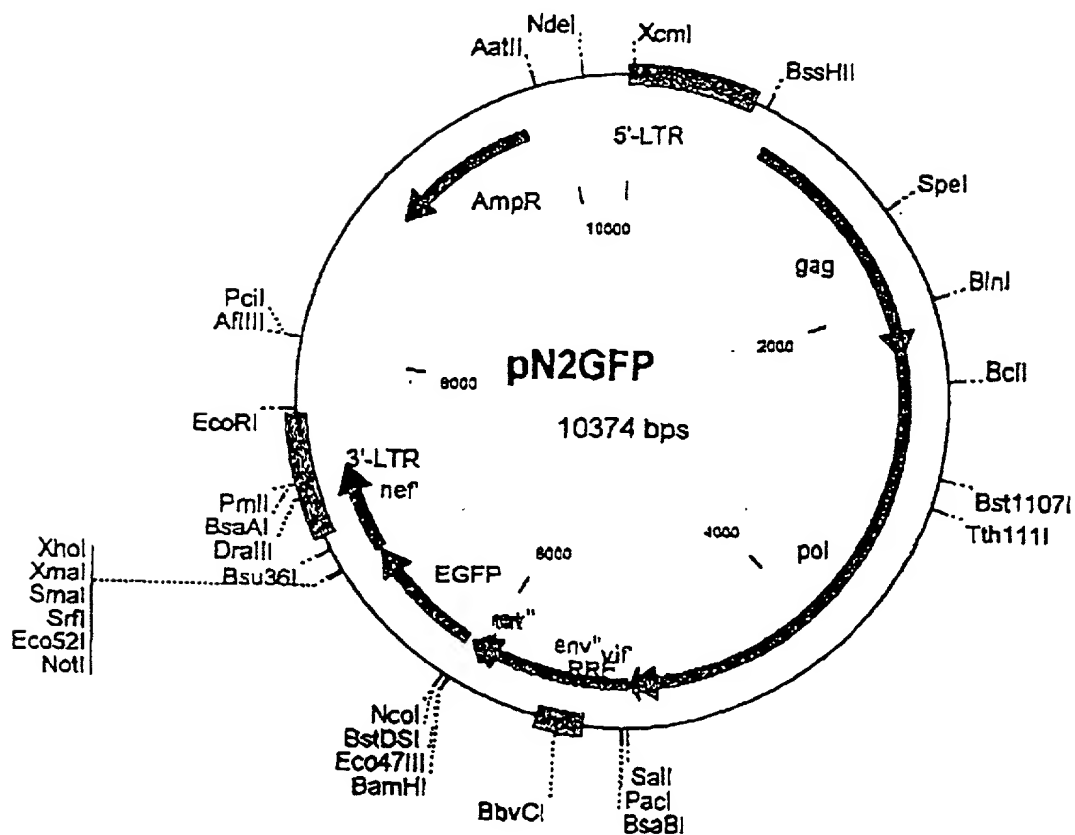


Fig 1 I



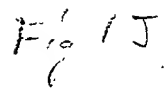
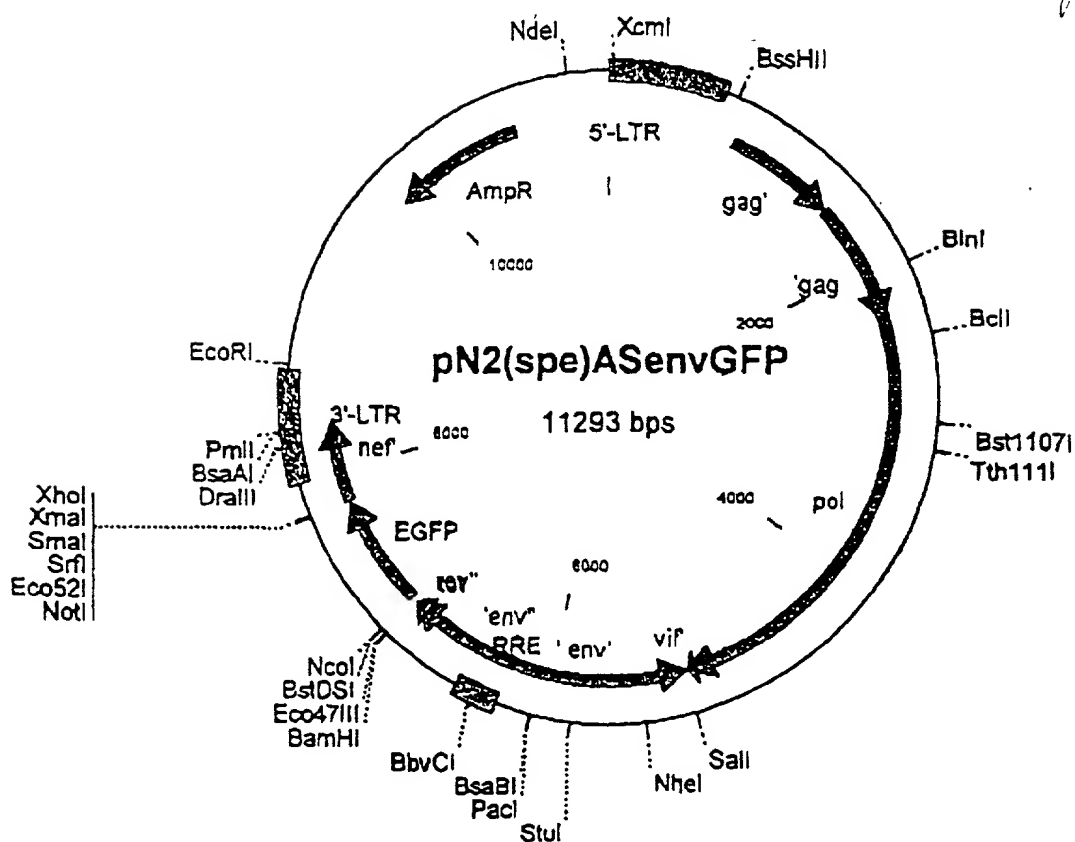


Fig 1K



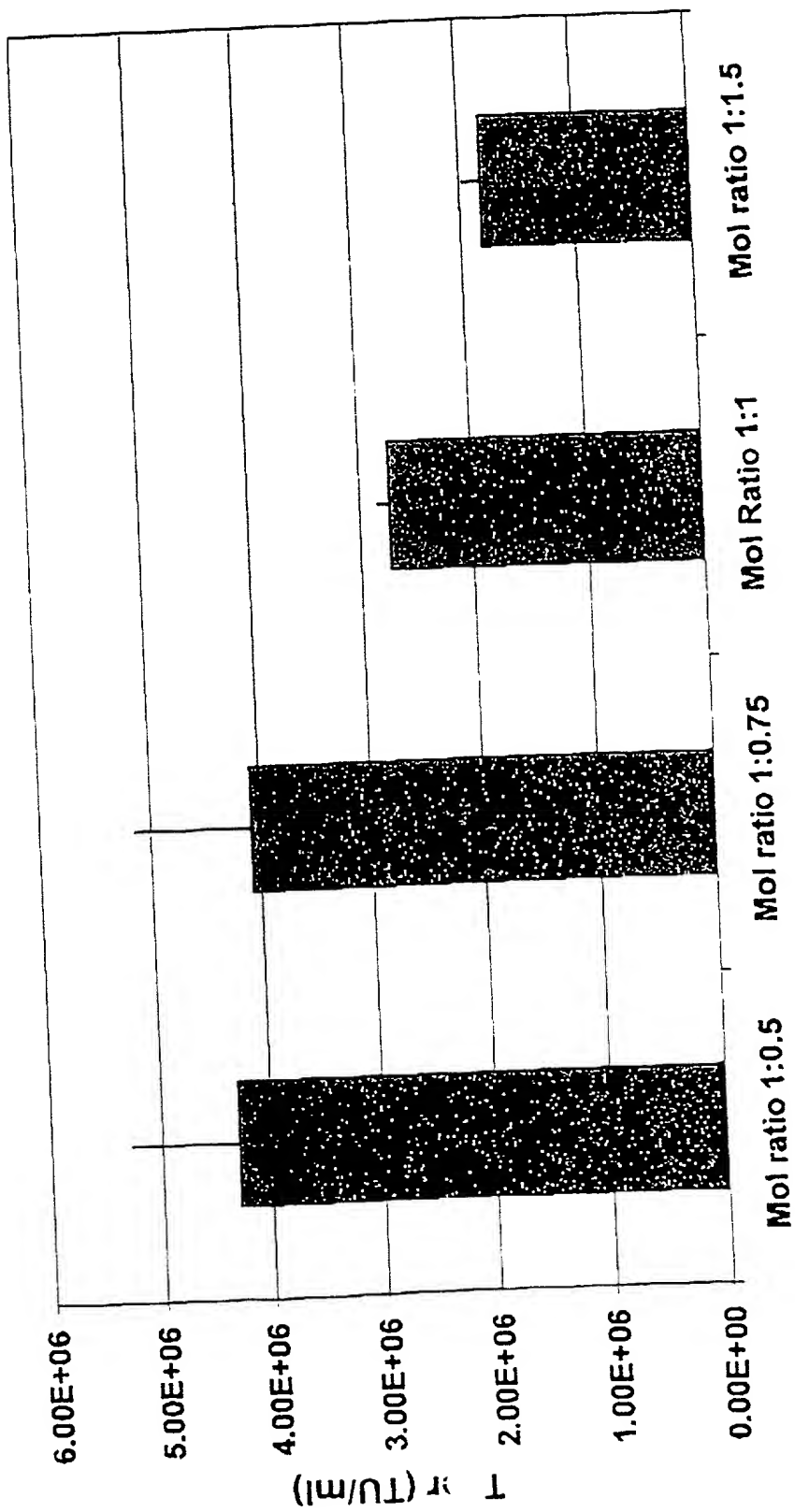
A +105 GTGTGCCCGTCTG +117
B AC . . .

A +118 TTGTGTGACTCTG +130
B

A +131 GTAAGTAGAGATC +143
B . C . G A .

FIG. 2

09819401-091001
T00T60 T046T850



Ratio Optimization for pN1(cPTC)ASenvGFP Vector

T00T60* T046T860

3A

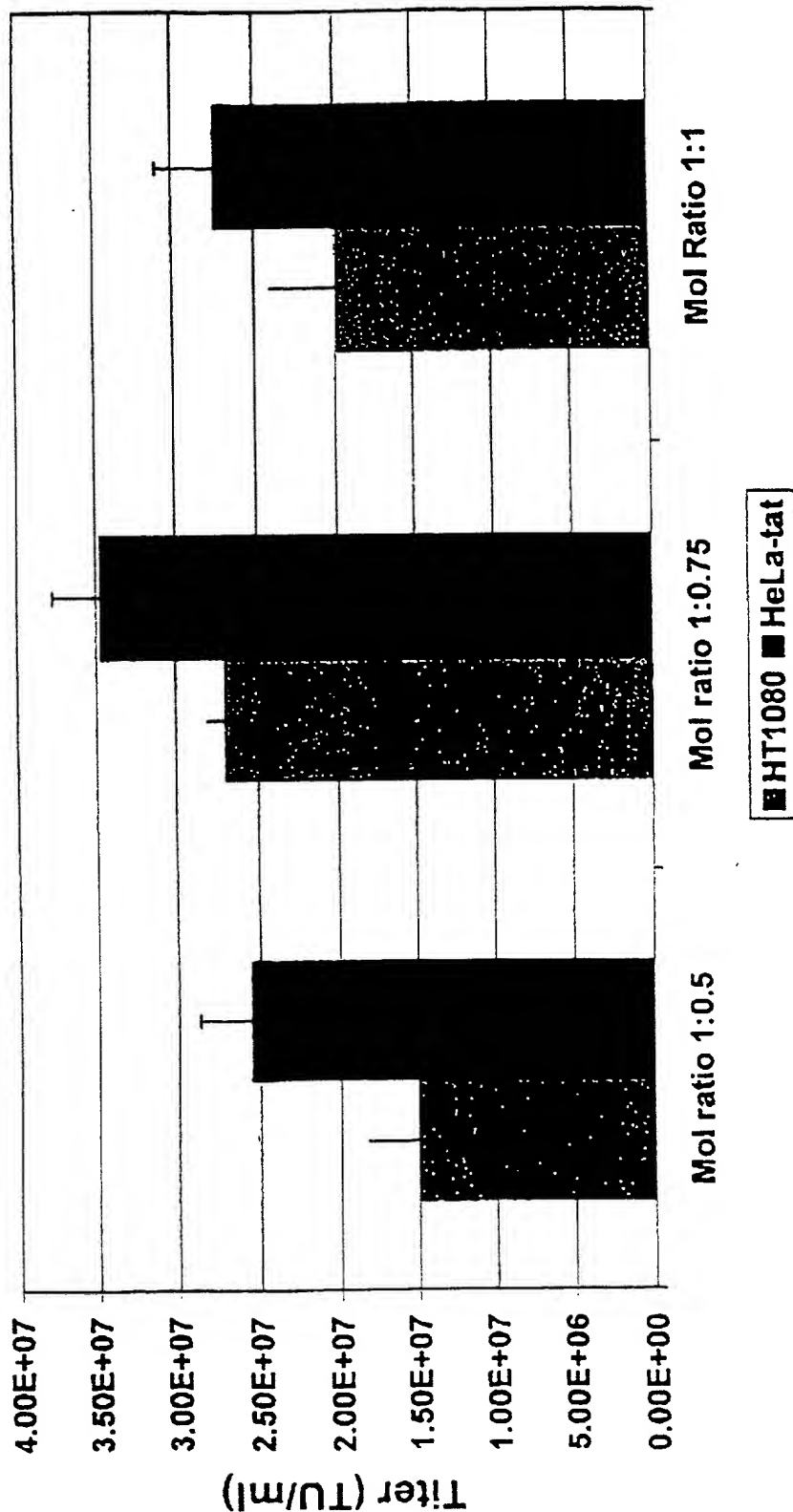


TOT60" TOT6T850

2K

Ratio Optimization for pN1(cPT)GFP Vectors

Title: IMPROVED CONDITIONALLY REPLICATING
VECTORS FOR INHIBITING VIRAL INFECTIONS
First Inventor: Laurent HUMEAU et al
Application No.: 09/819,401 - Docket No. 3972720000700
Sheet 14 of 49



Ratio Optimization for pN1(cPT2)ASenvGFP Vector

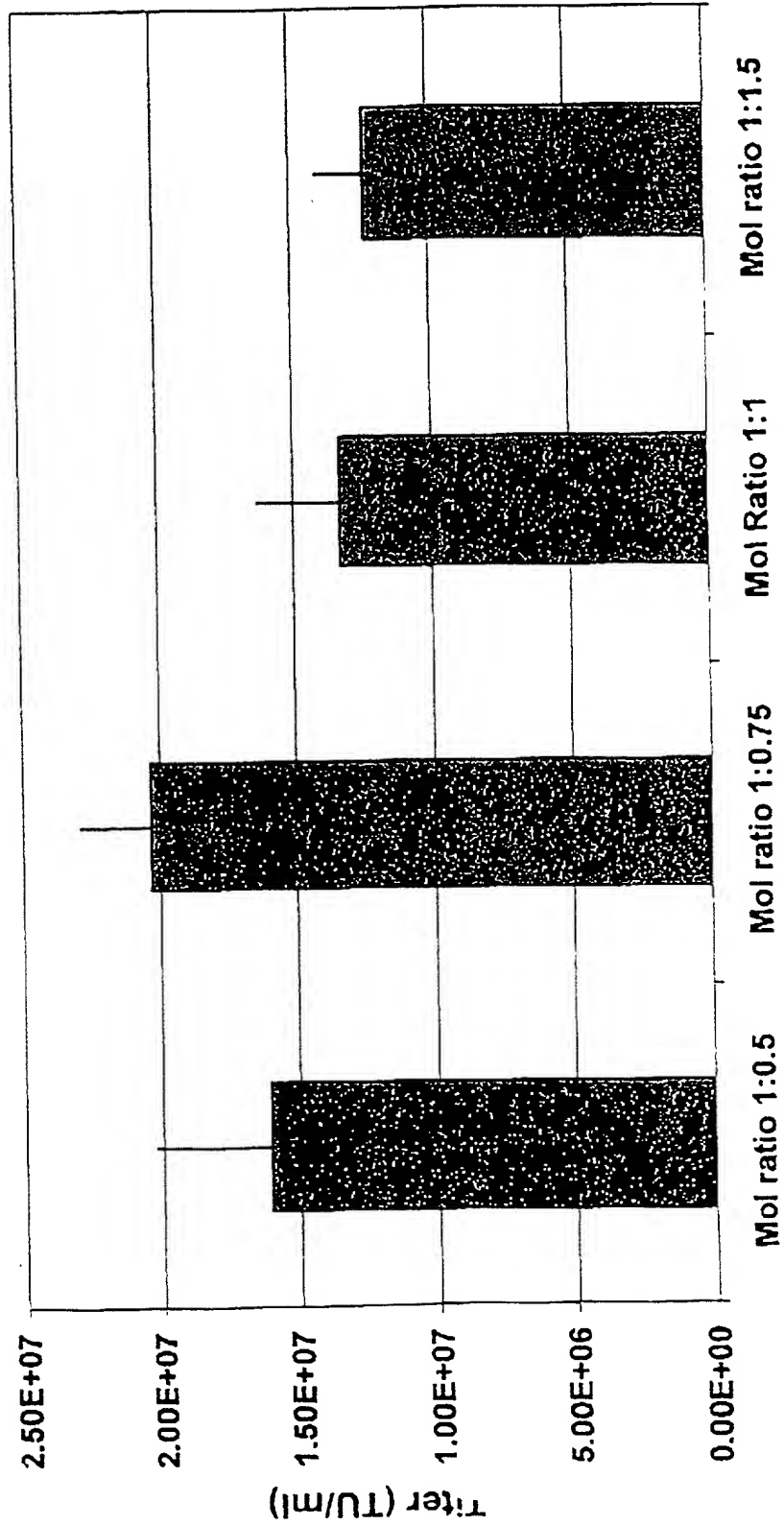


FIGURE 10

3b

Best Vector to Packaging Ratio for pN1cGFP Vector

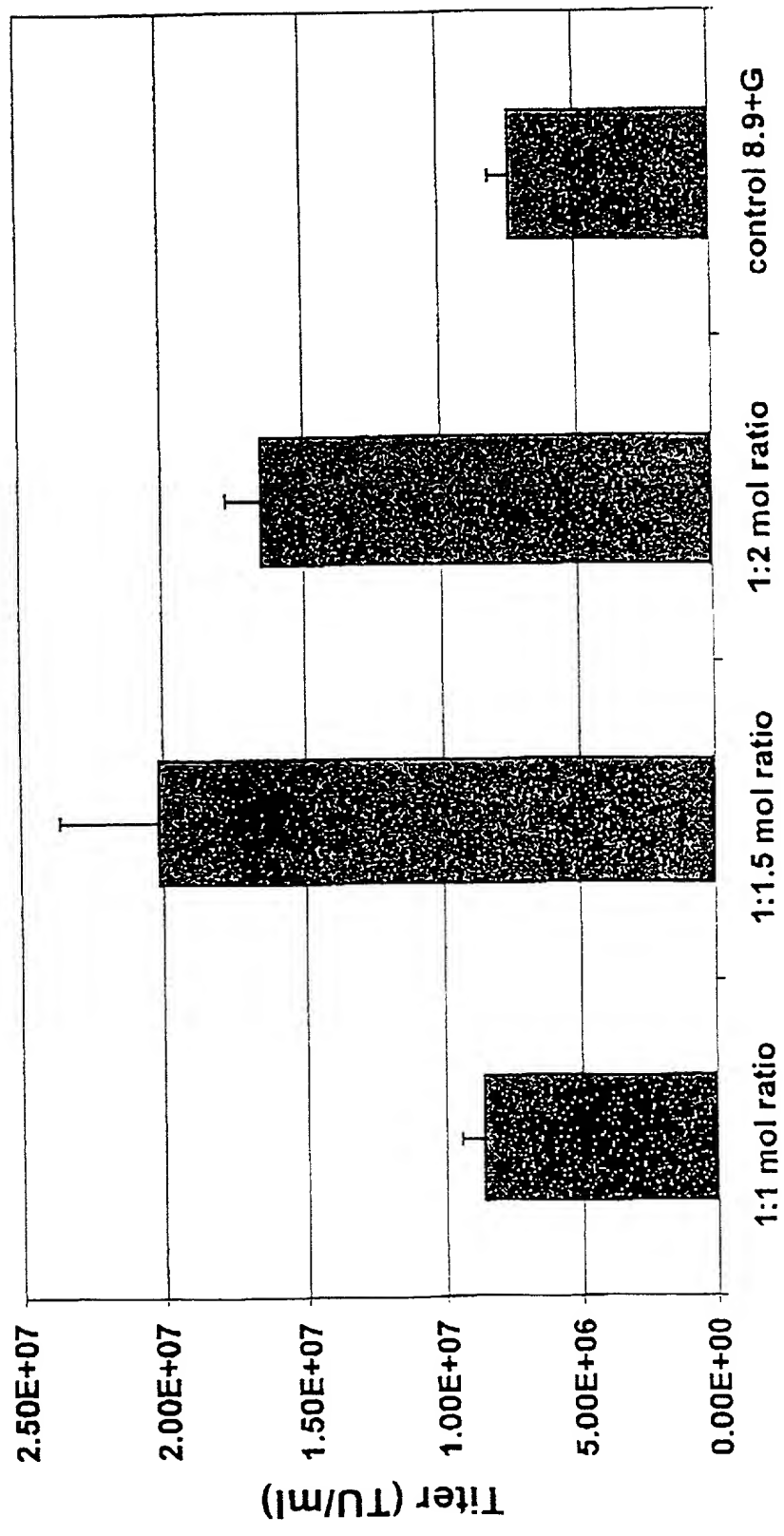


FIG. 10

3E

Optimization of vector to packaging ratio for pN2cGFP

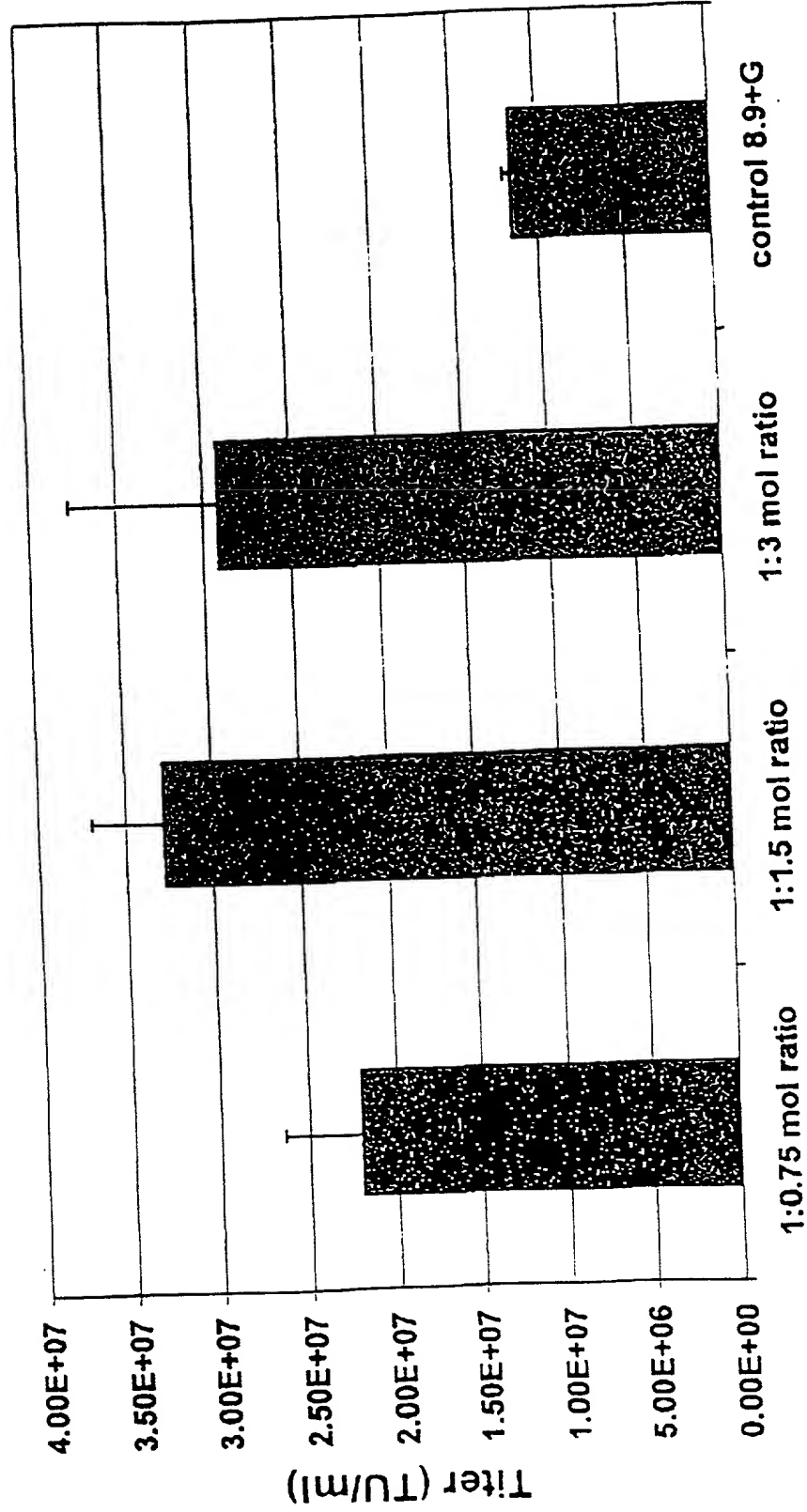


Fig 4A

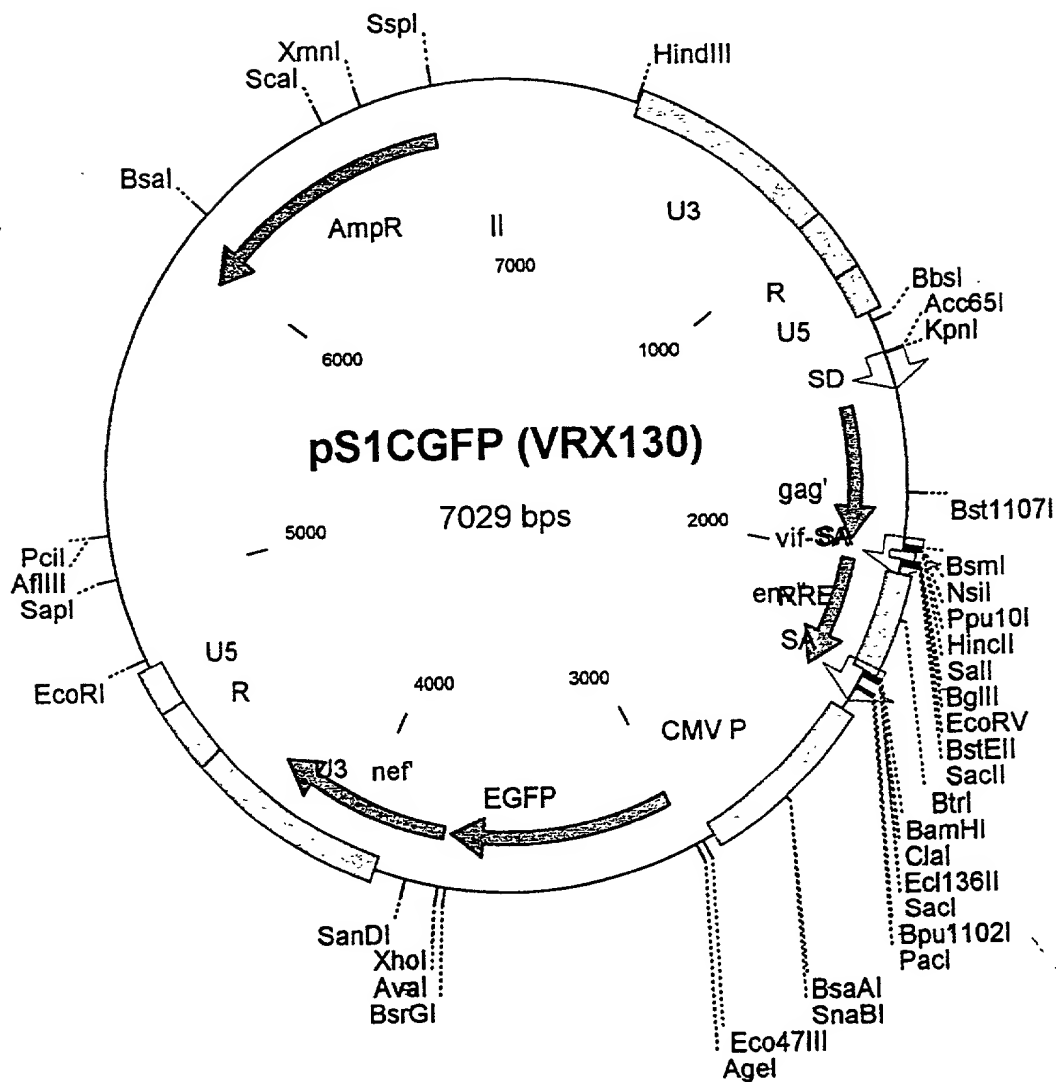
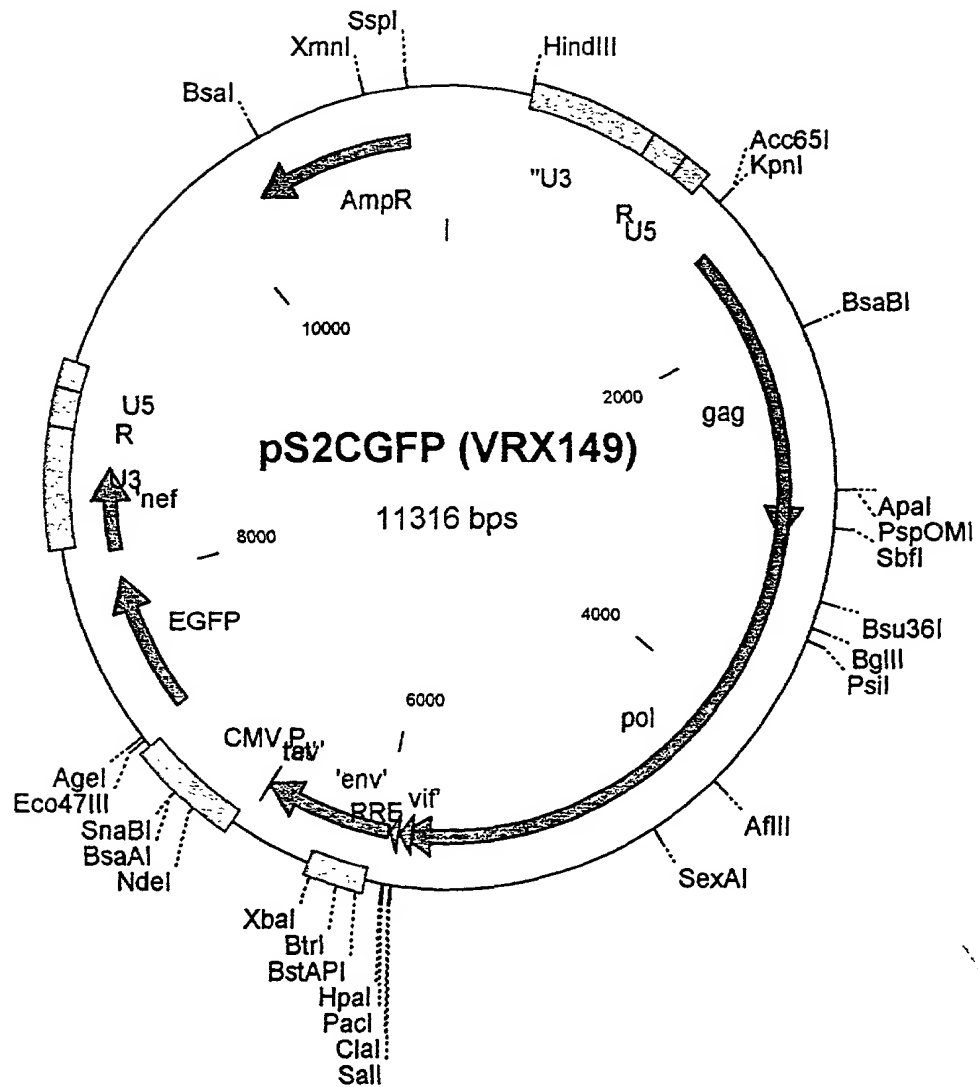


Fig 4E

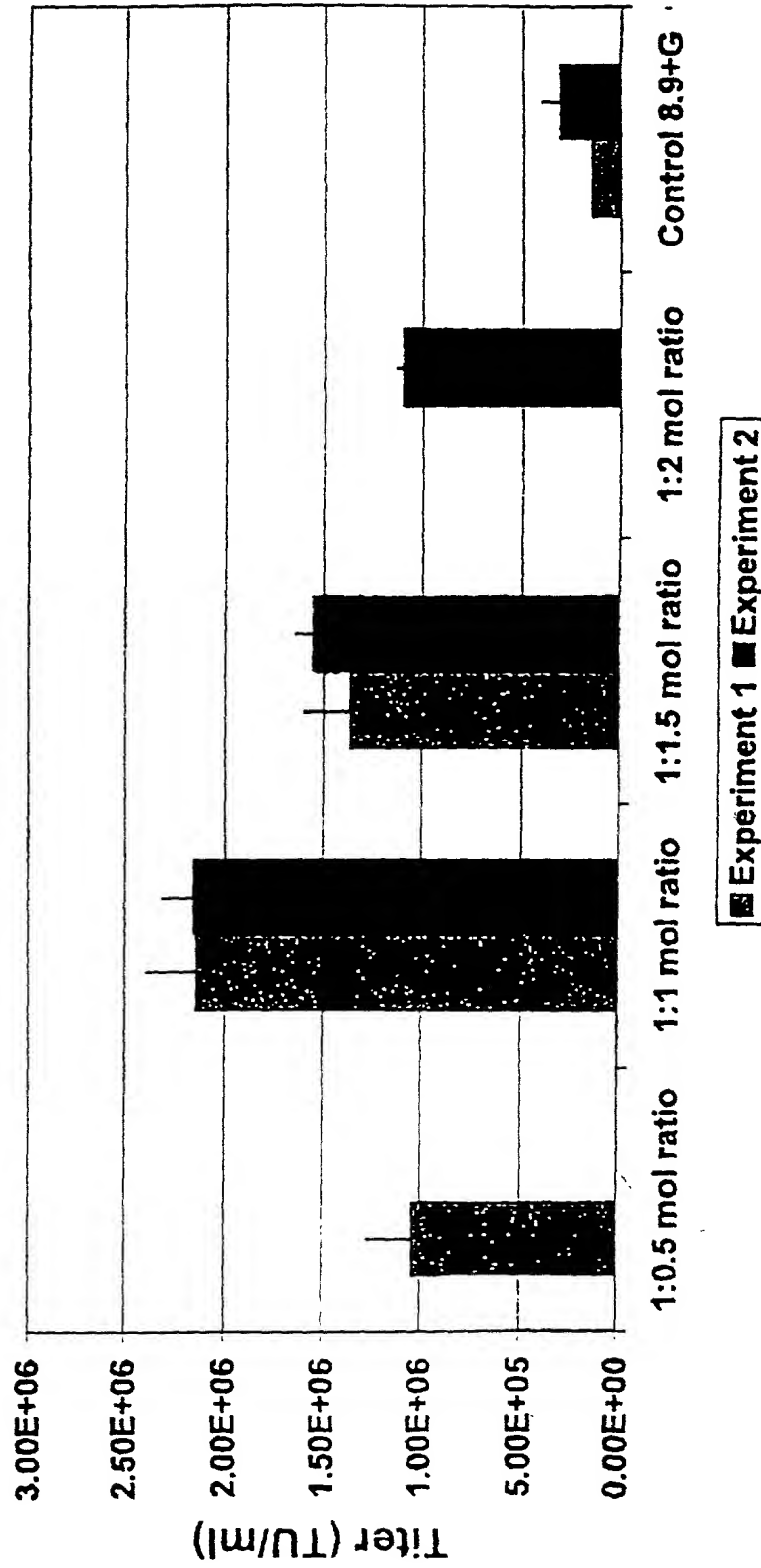


09819401.091001

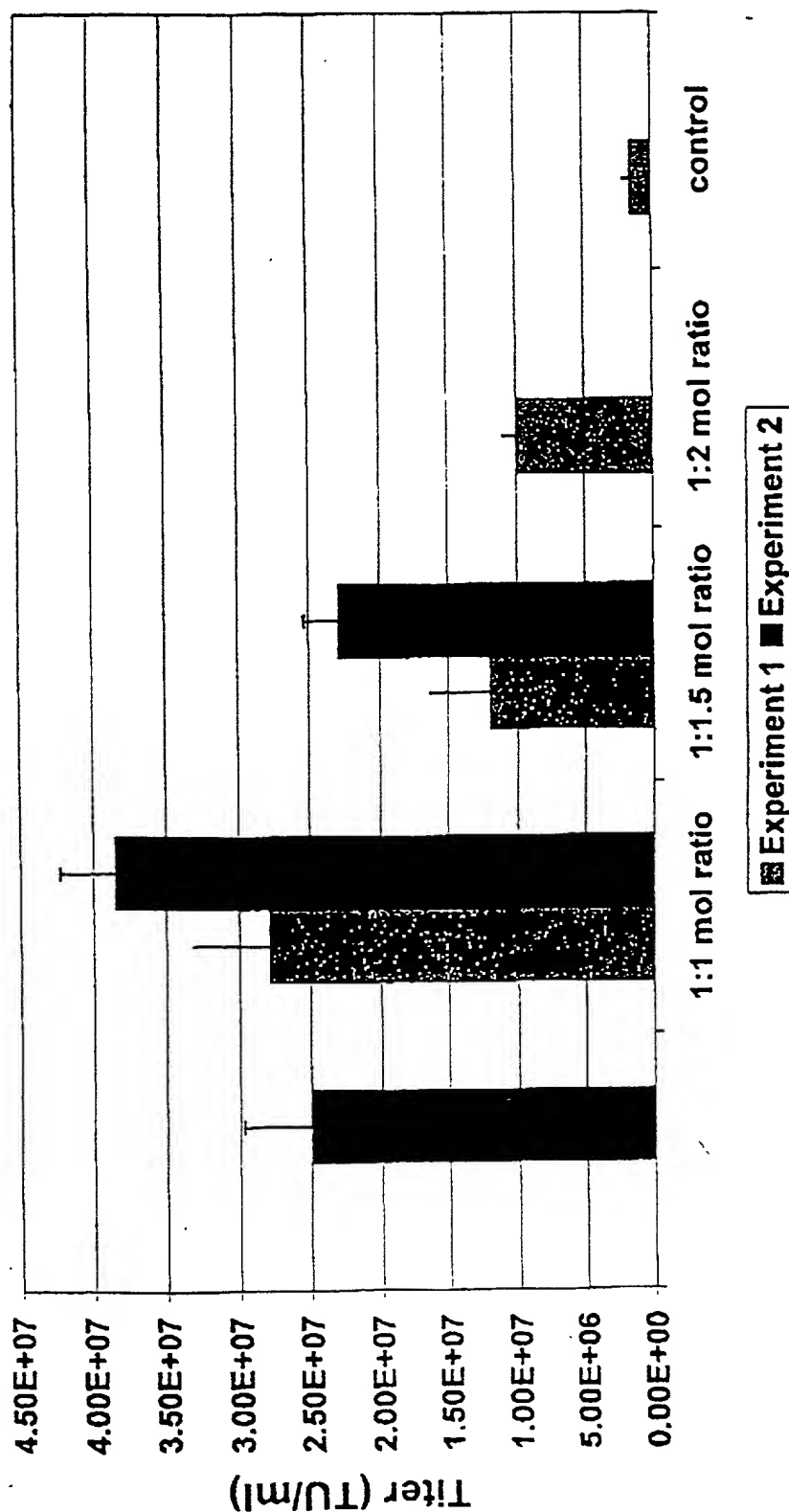
FIGURE 10

5A

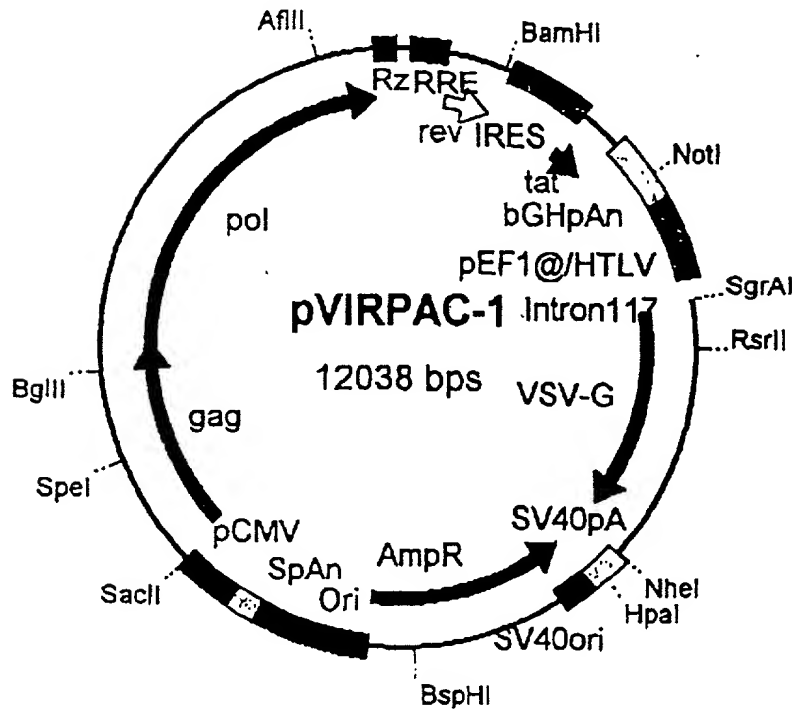
Ratio Optimization for Packaging of pS1cGFP vectors.



Optimization of vector to packaging ratio for pS2cGFP



Packaging Construct



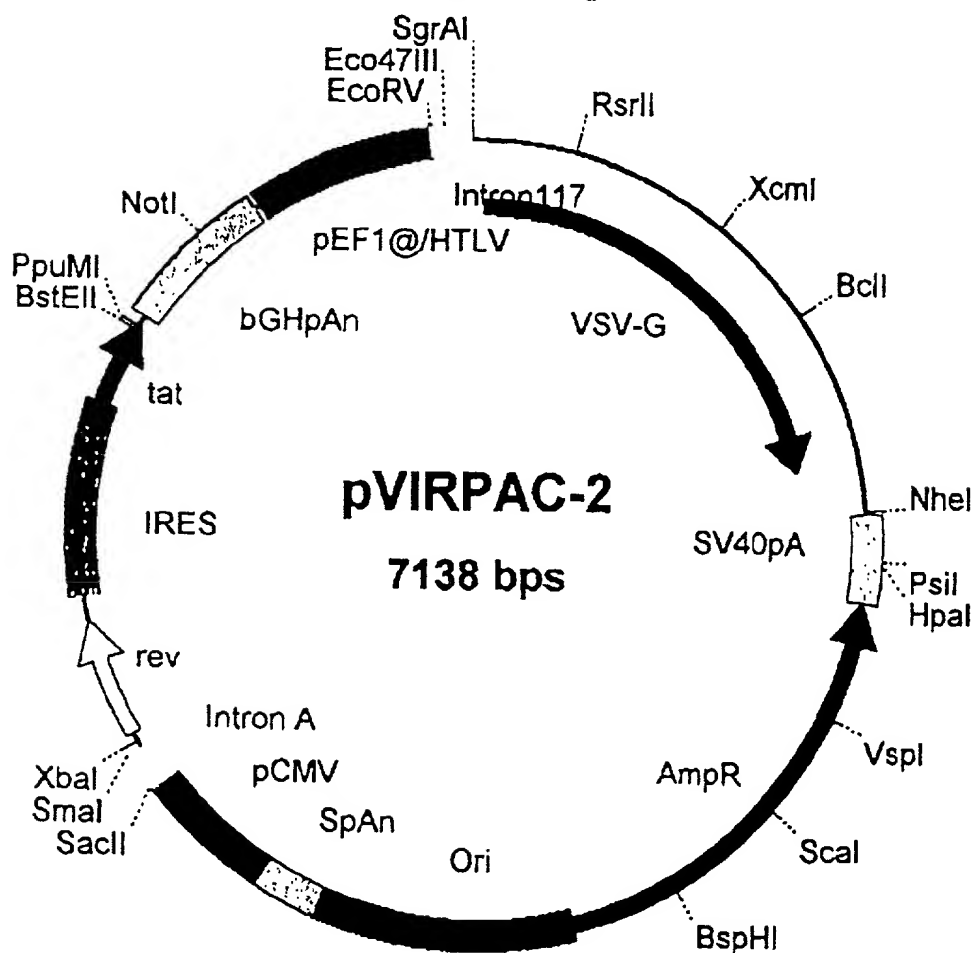
New features:

- First 42 nt of gag are degenerated.
- Tat and rev represented as cDNA.
- First 208 nt of rev and last 183 nt of tat are degenerated.
- RRE from HIV-2 is used instead of HIV-1 RRE.

These features eliminate almost any homology with the vector plasmid, make system safer.

- Anti-U5 ribozyme is expressed within gag/pol/RRE cassette, further improving safety.
- Gag/pol/rev/tat/RRE cassette and VSV-G expressed from the same plasmid. This feature may enhance packaging efficiency and titers of the vectors.

Fig. 6B Packaging Plasmid
for Second Generation
Vectors



09/819,401-091004

Fig. 6C Packaging Plasmid
for First Generation Vectors

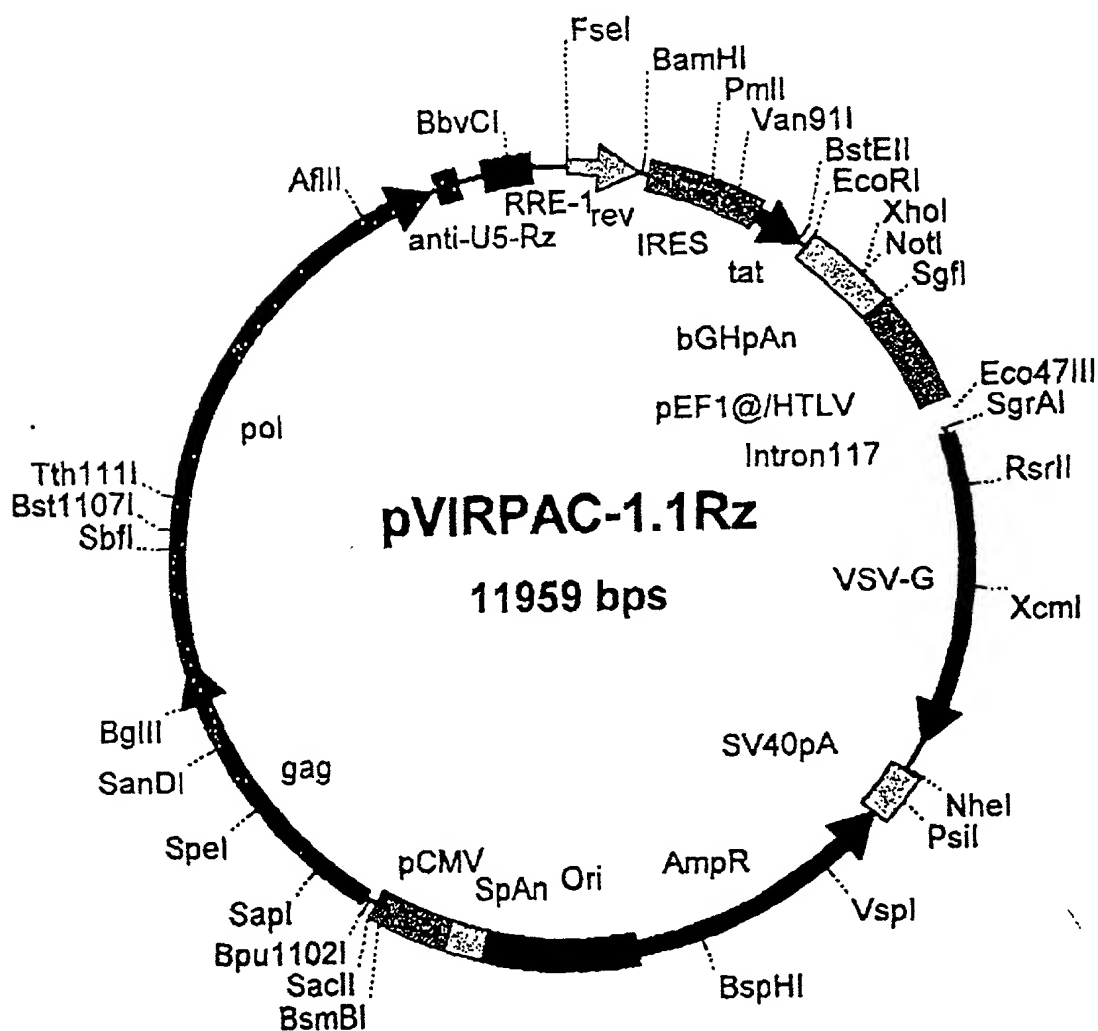
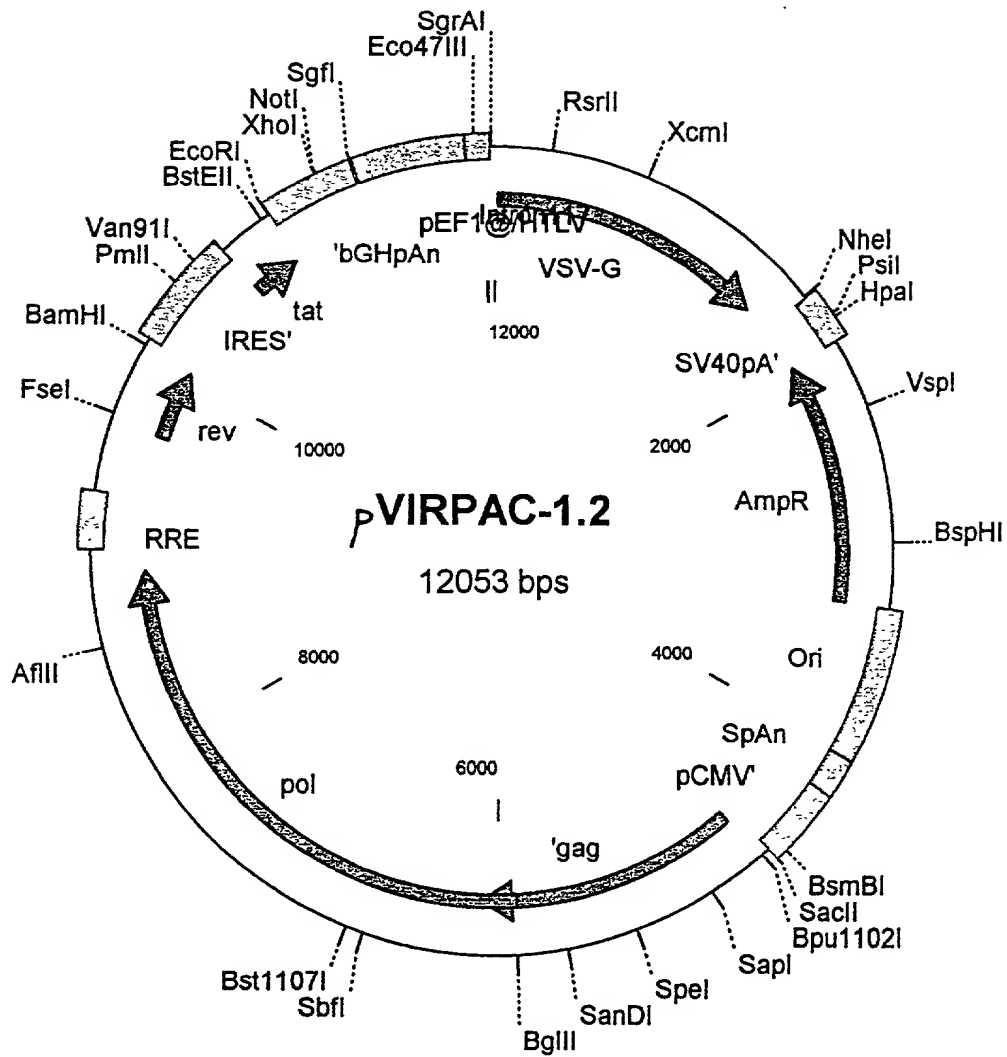


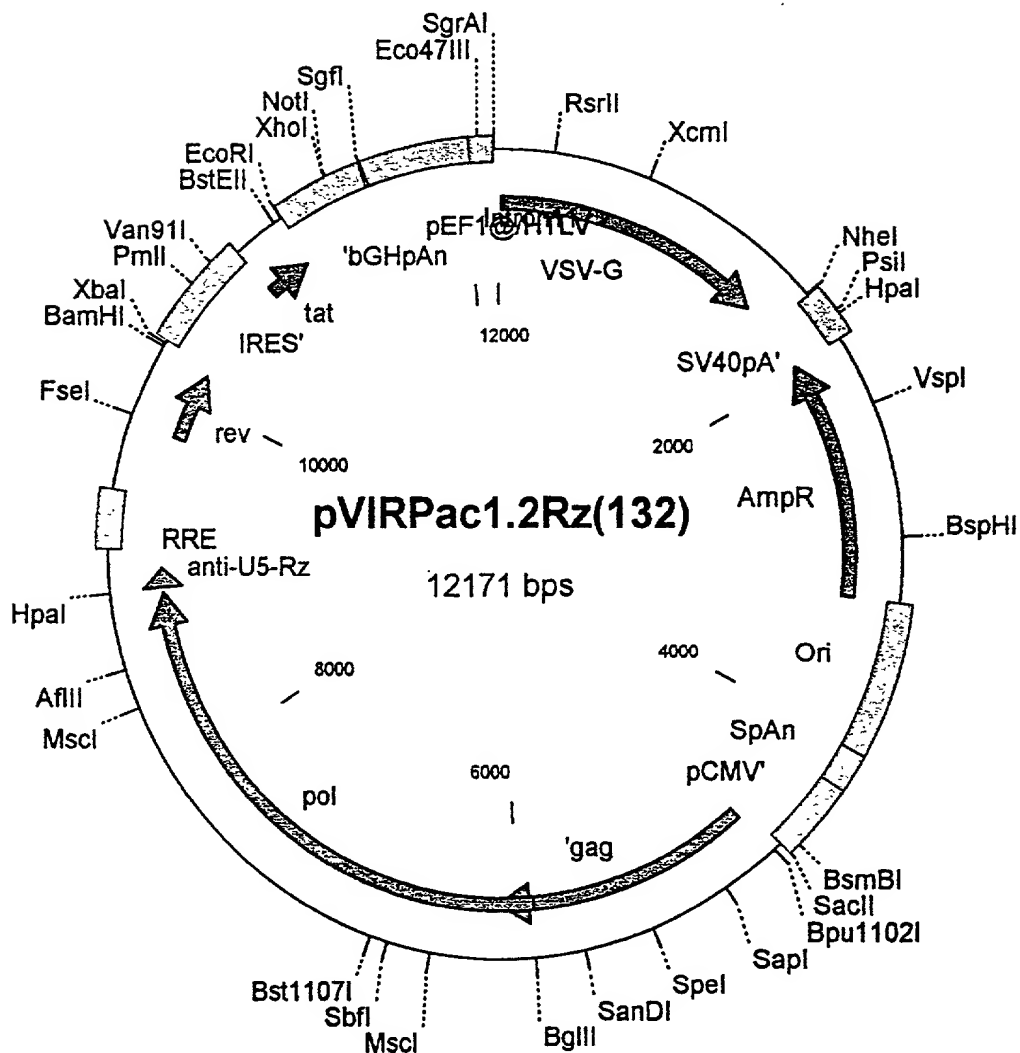
FIG. 6C

Fig 6D



09819401.091001

Fig 6E



1.00160" T046T860

Fig 6F

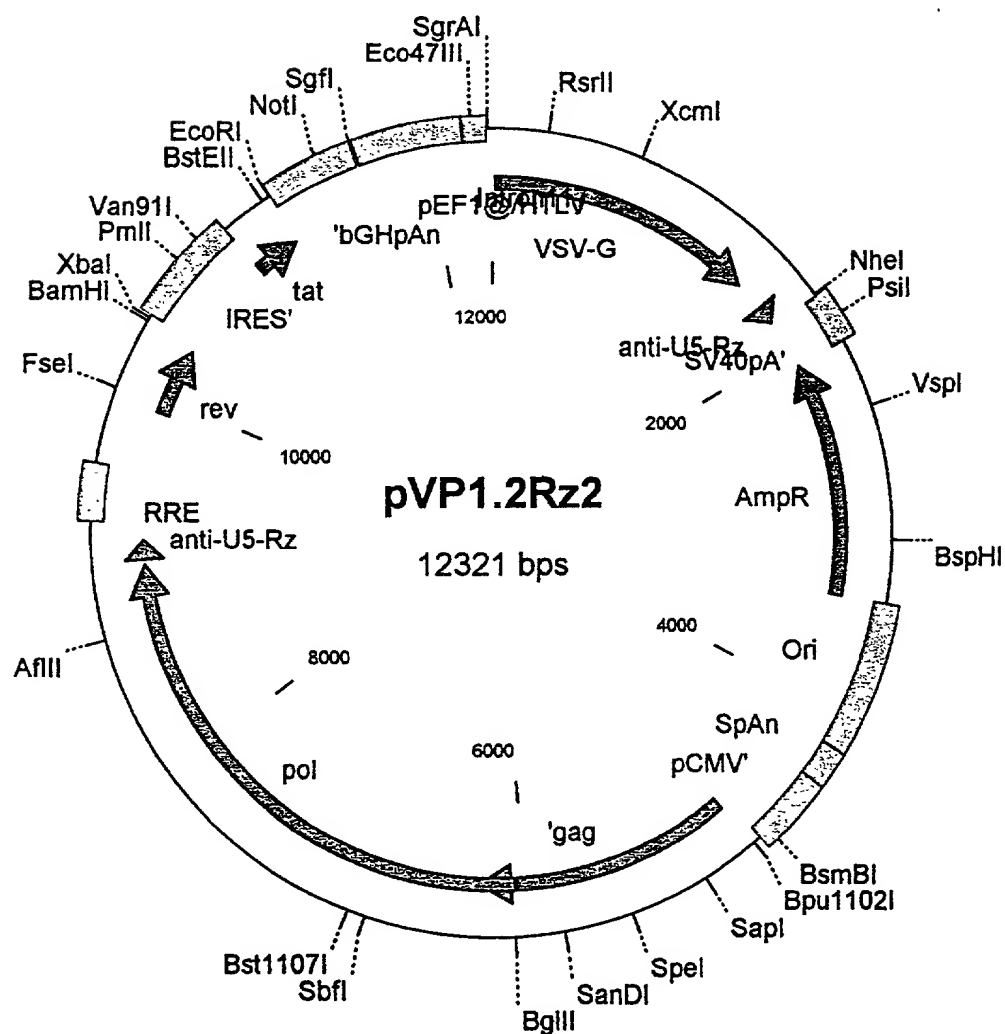


Fig 66

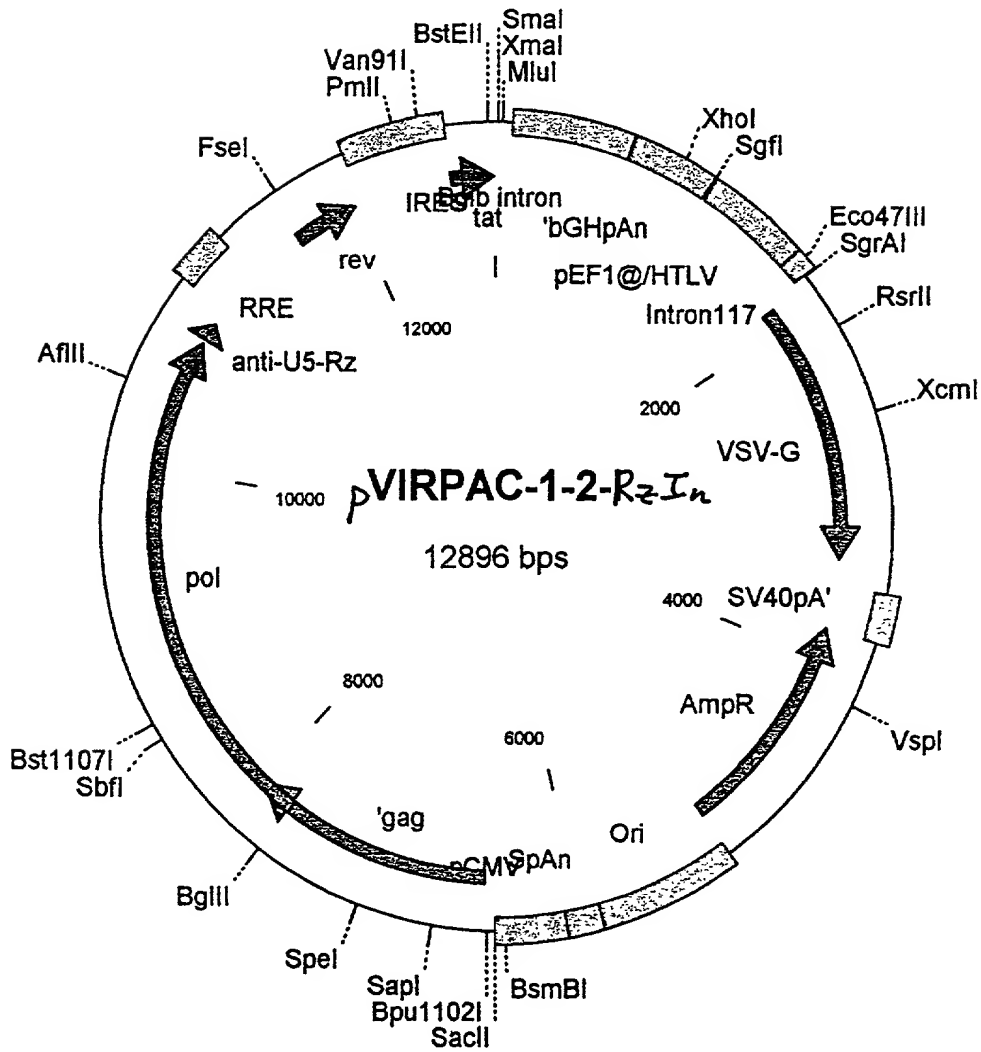
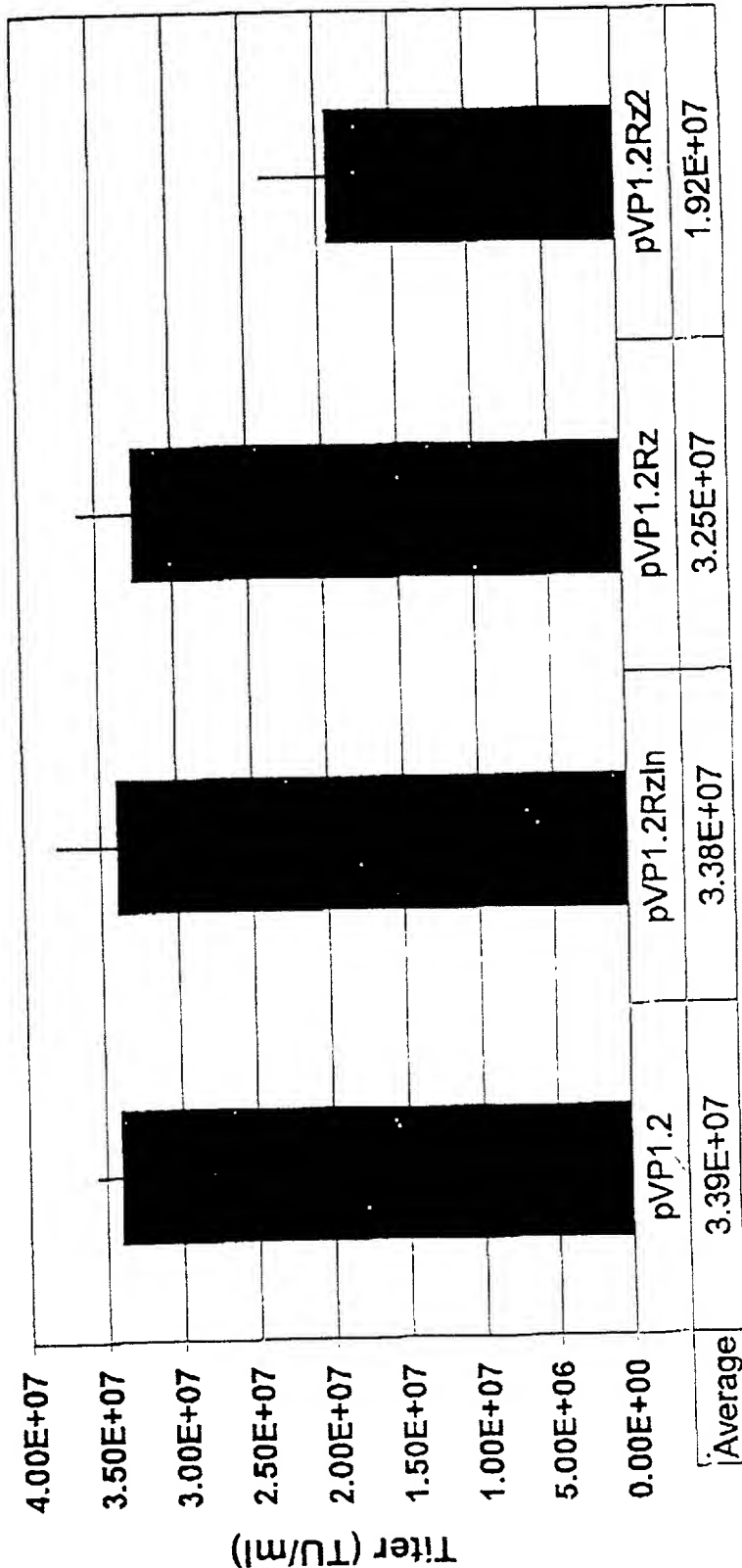




FIG. 1

Fig. 1

Influence of Ribozyme(s) in the Packaging on pN1(cPT)GFP Vector Titers in HeLa-tat Cells



[illegible]

8
F-3

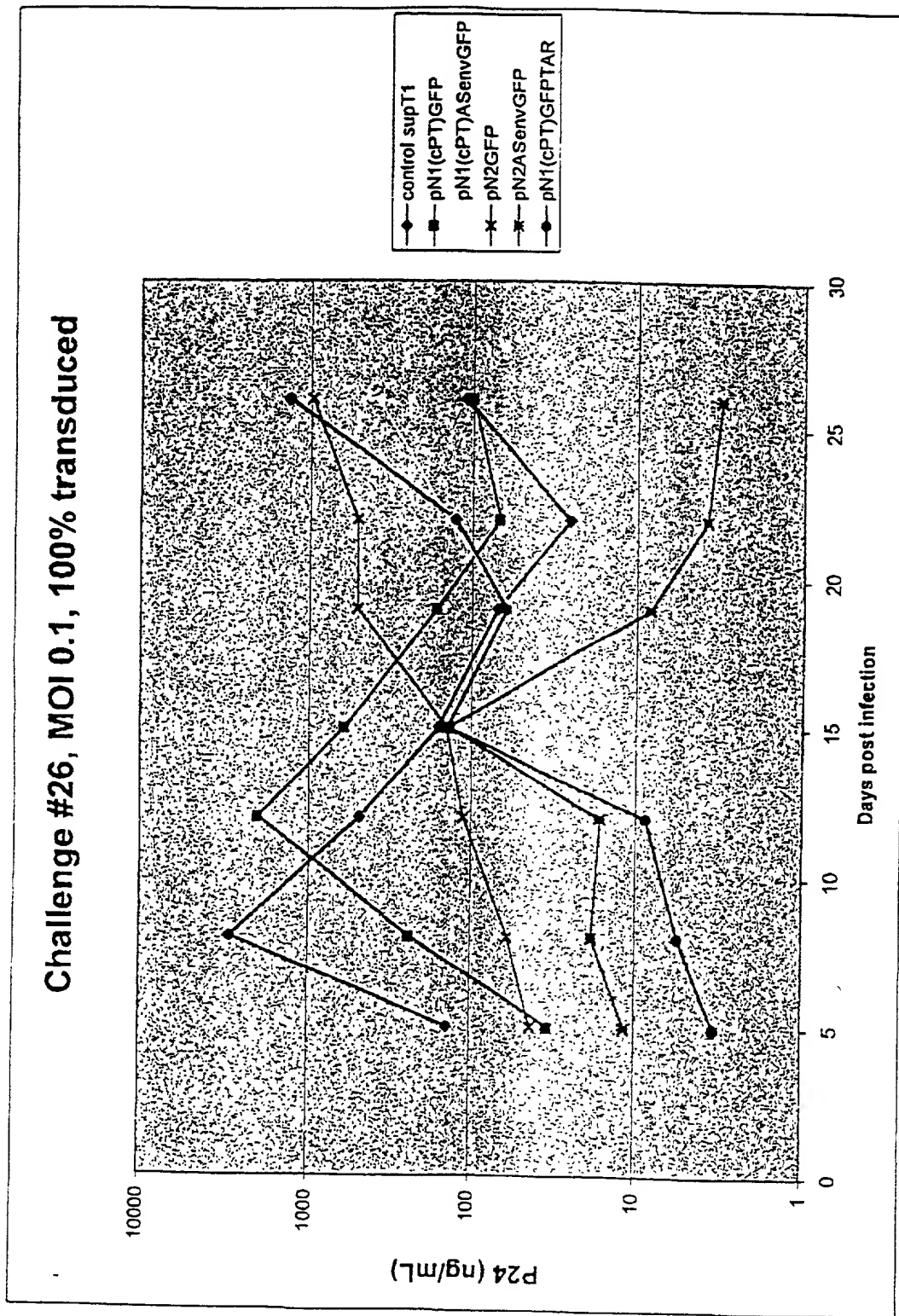


FIGURE 9A

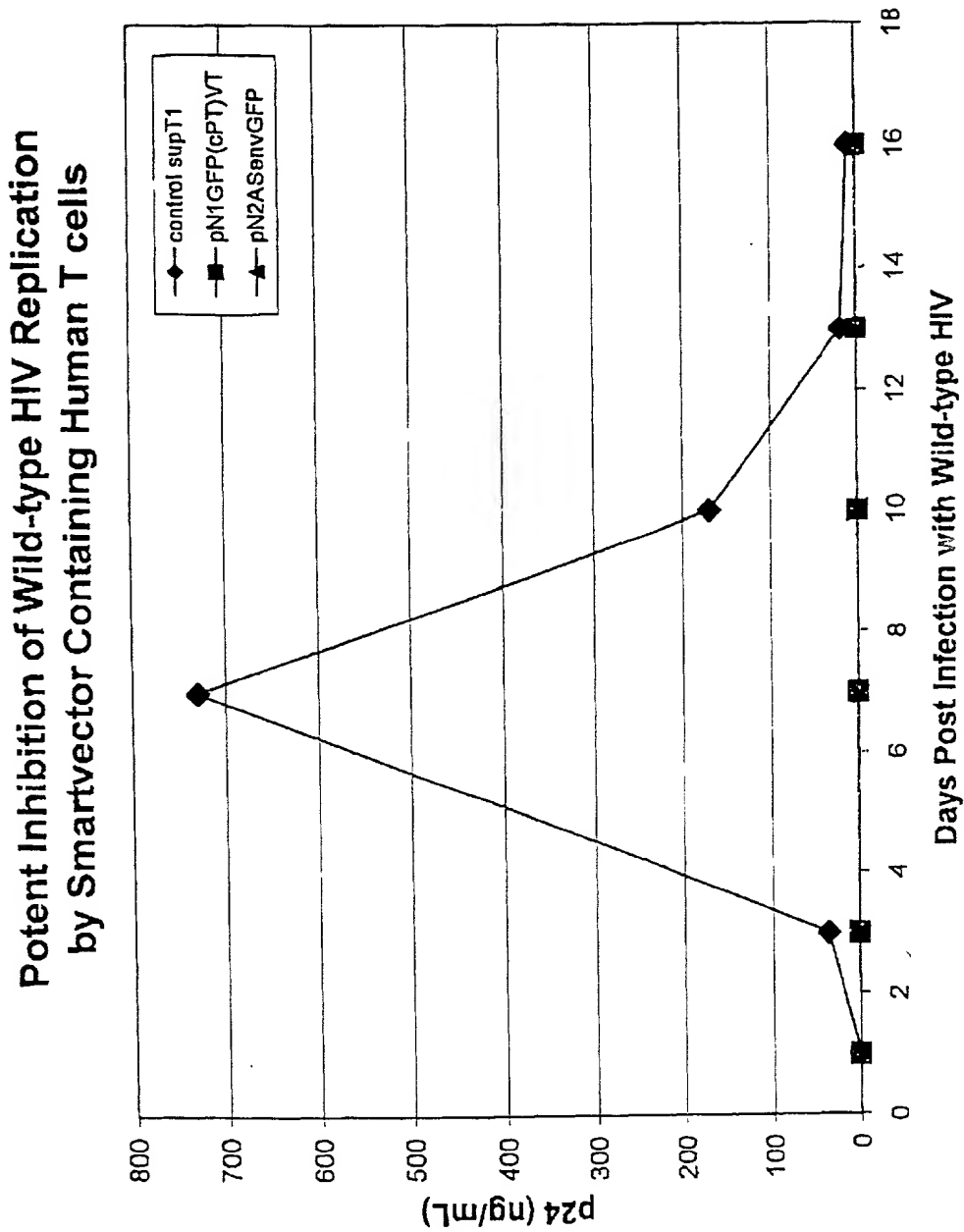




Figure 9B

FIG. 9B

Potent Inhibition of Wild-type HIV Replication by Smartvector Containing T Cells

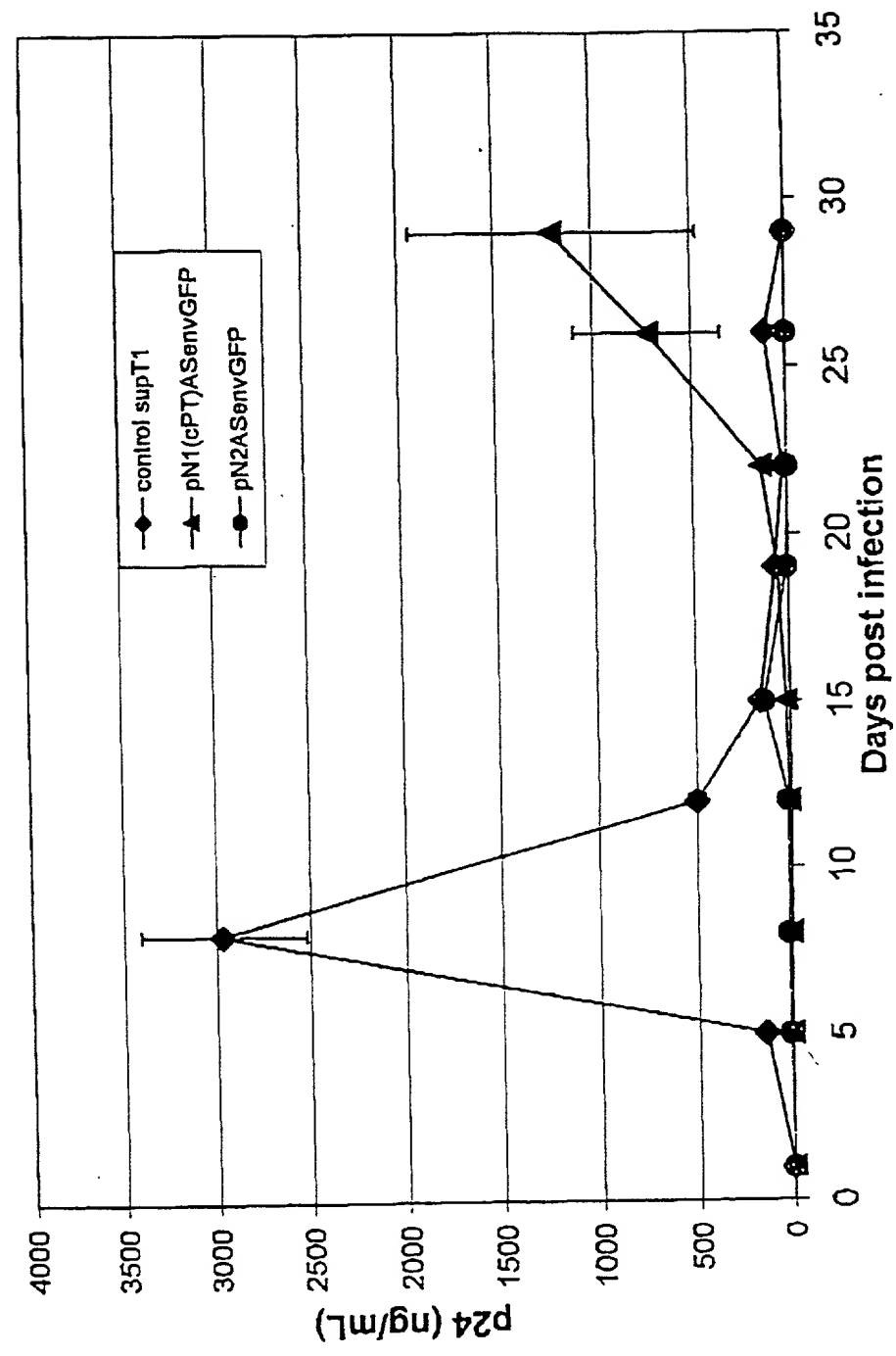
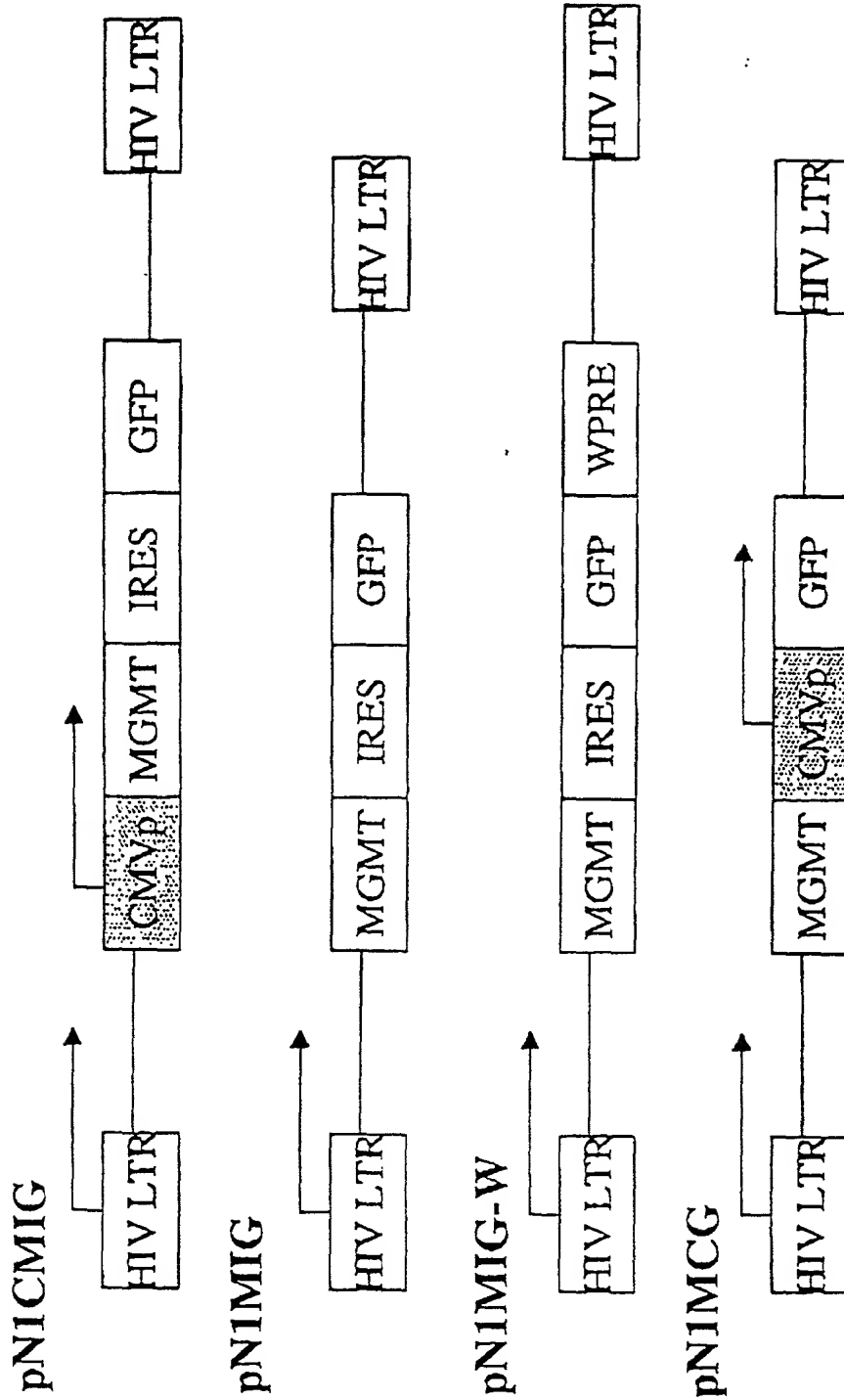
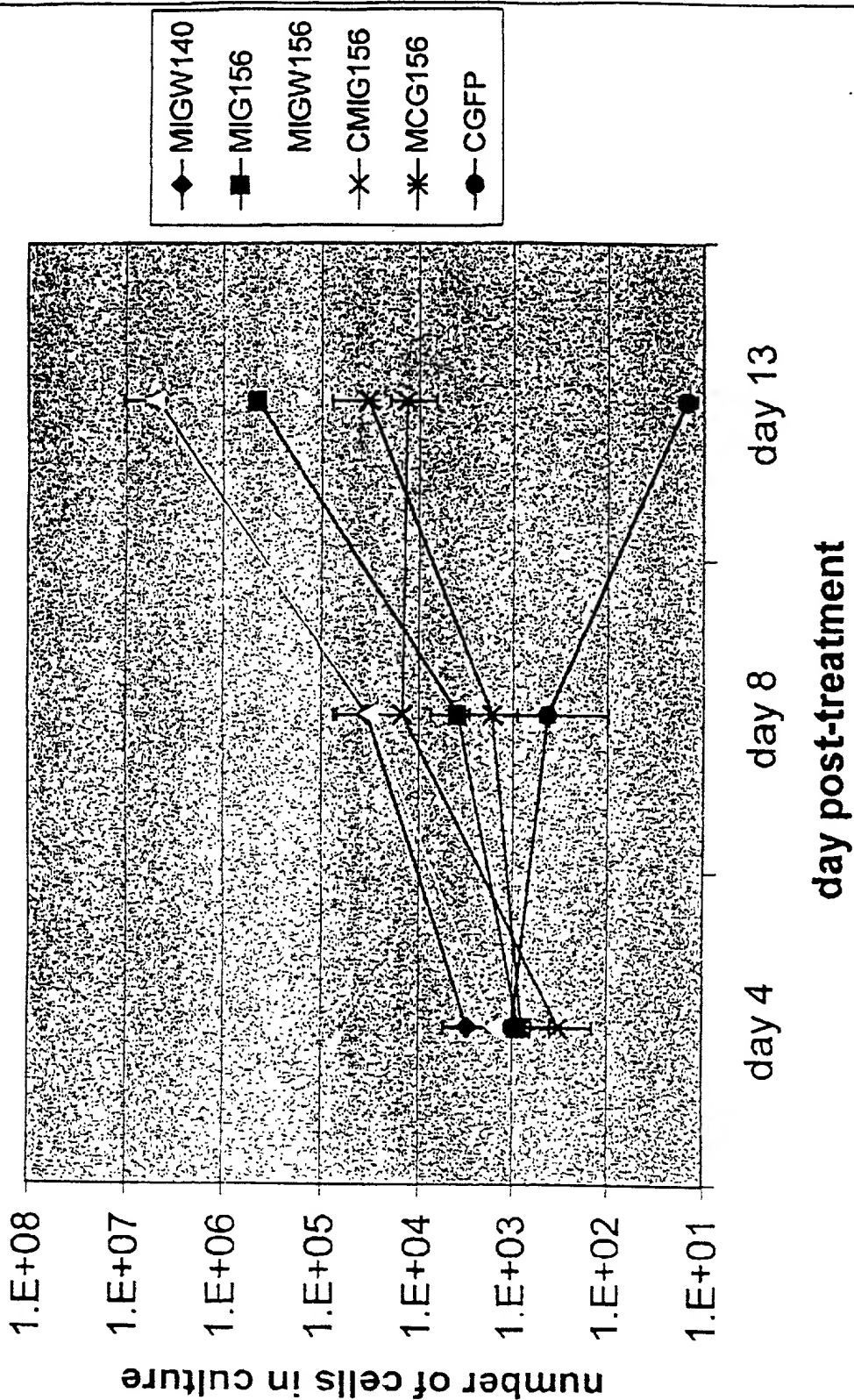


Fig 10A



Expansion of SupT1 cells after BG & BCNU



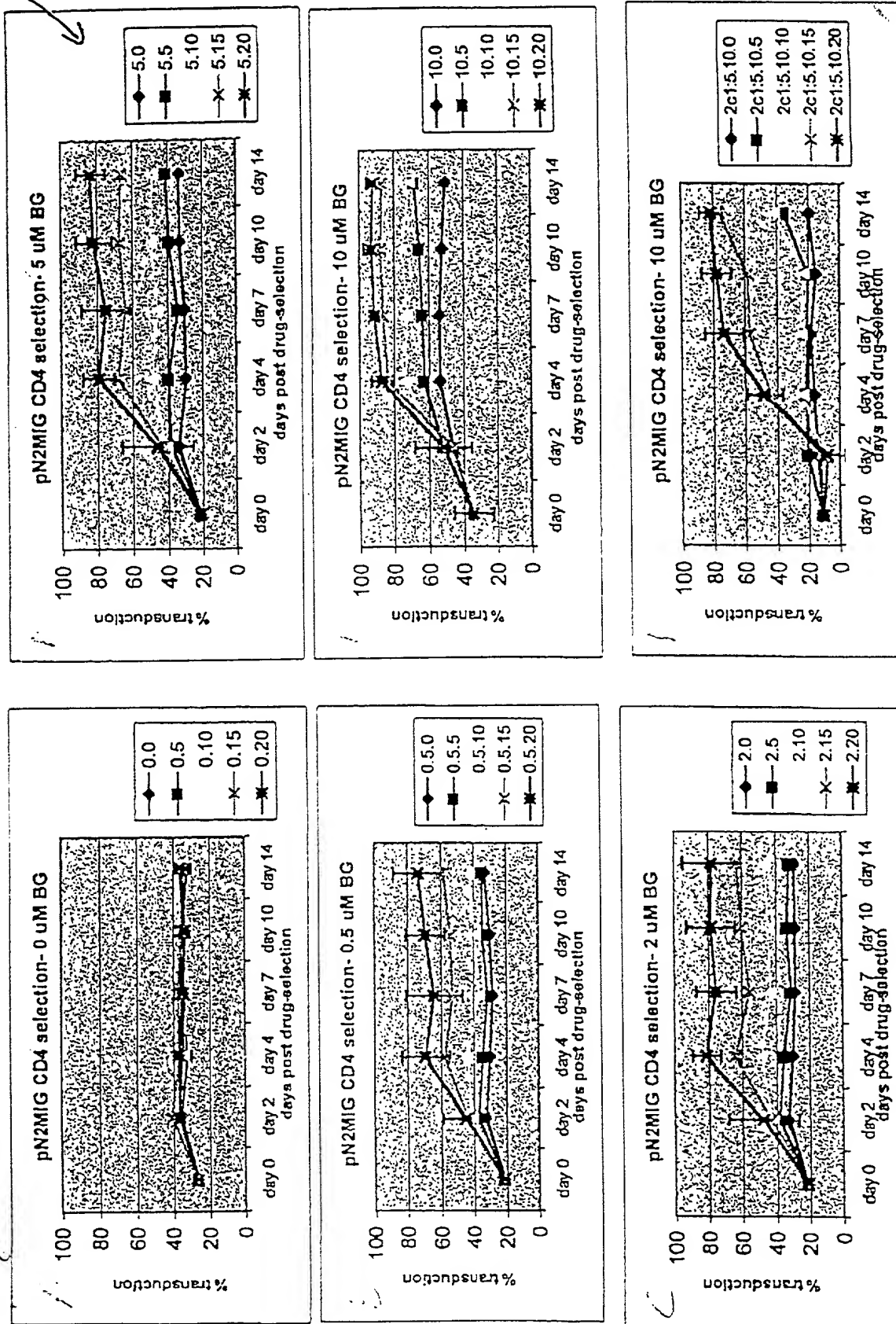
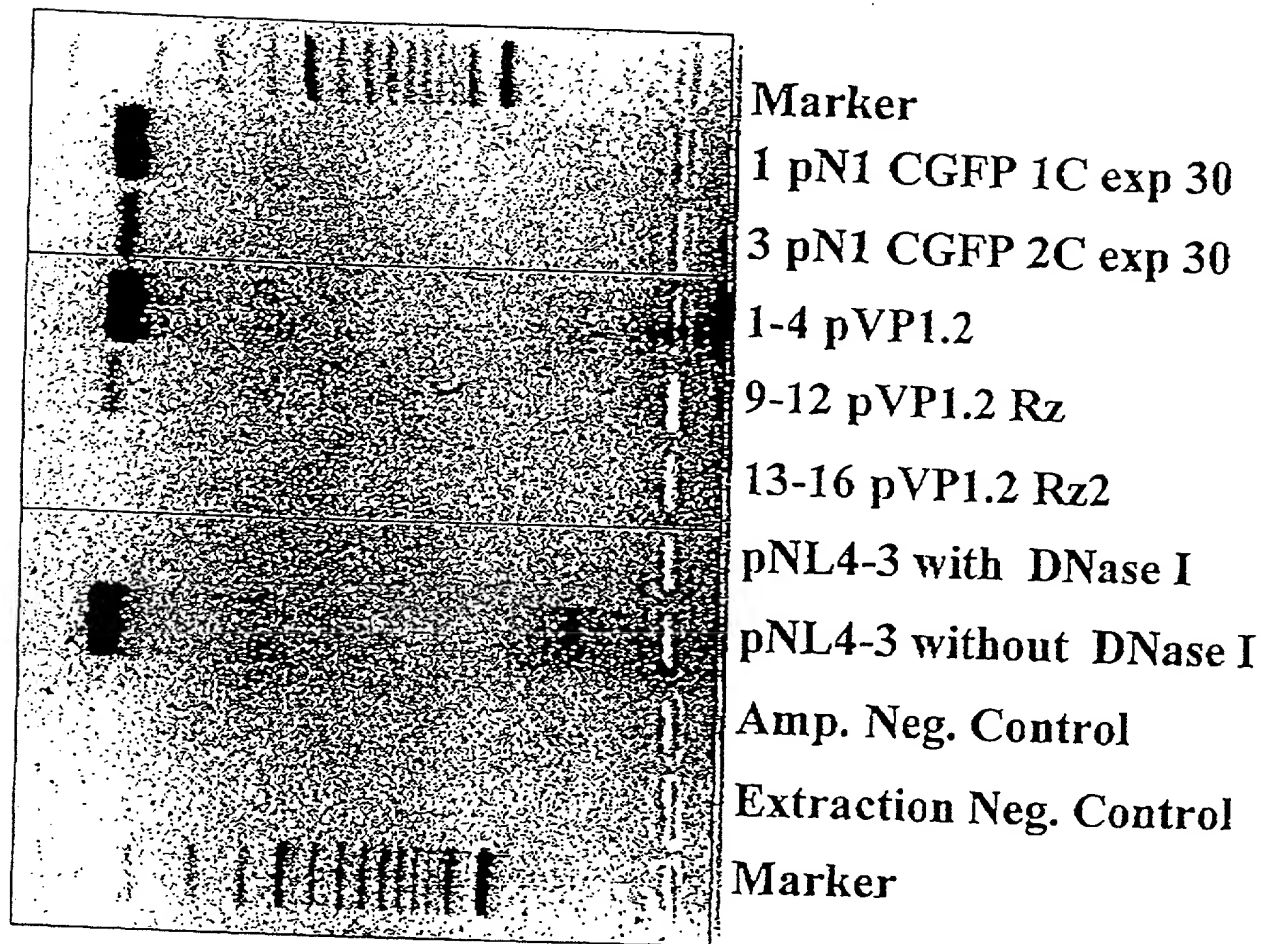
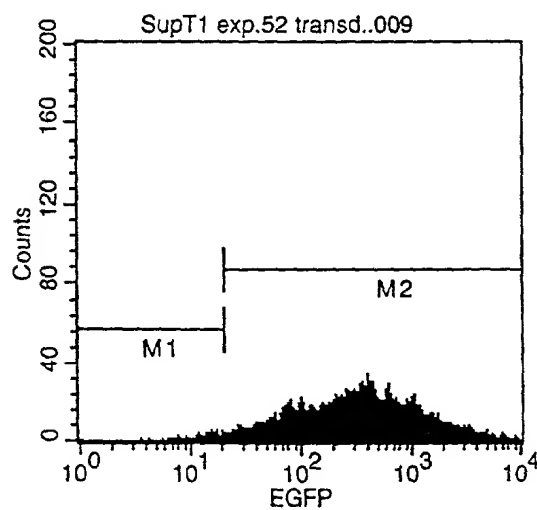


Fig 12



09819401.091001

Fig 13A



Histogram Statistics

File: SupT1 exp.52 transd..009 Sample ID: SupT1 ex
Tube: pN1(cPT)ASenvGFP 452 a Acquisition Date: 25-

Marker	Left, Right	Events	% Gated	% Total	Mean
All	1, 9910	6356	100.00	63.56	570.39
M1	1, 20	95	1.49	0.95	13.86
M2	20, 9910	6262	98.52	62.62	578.74

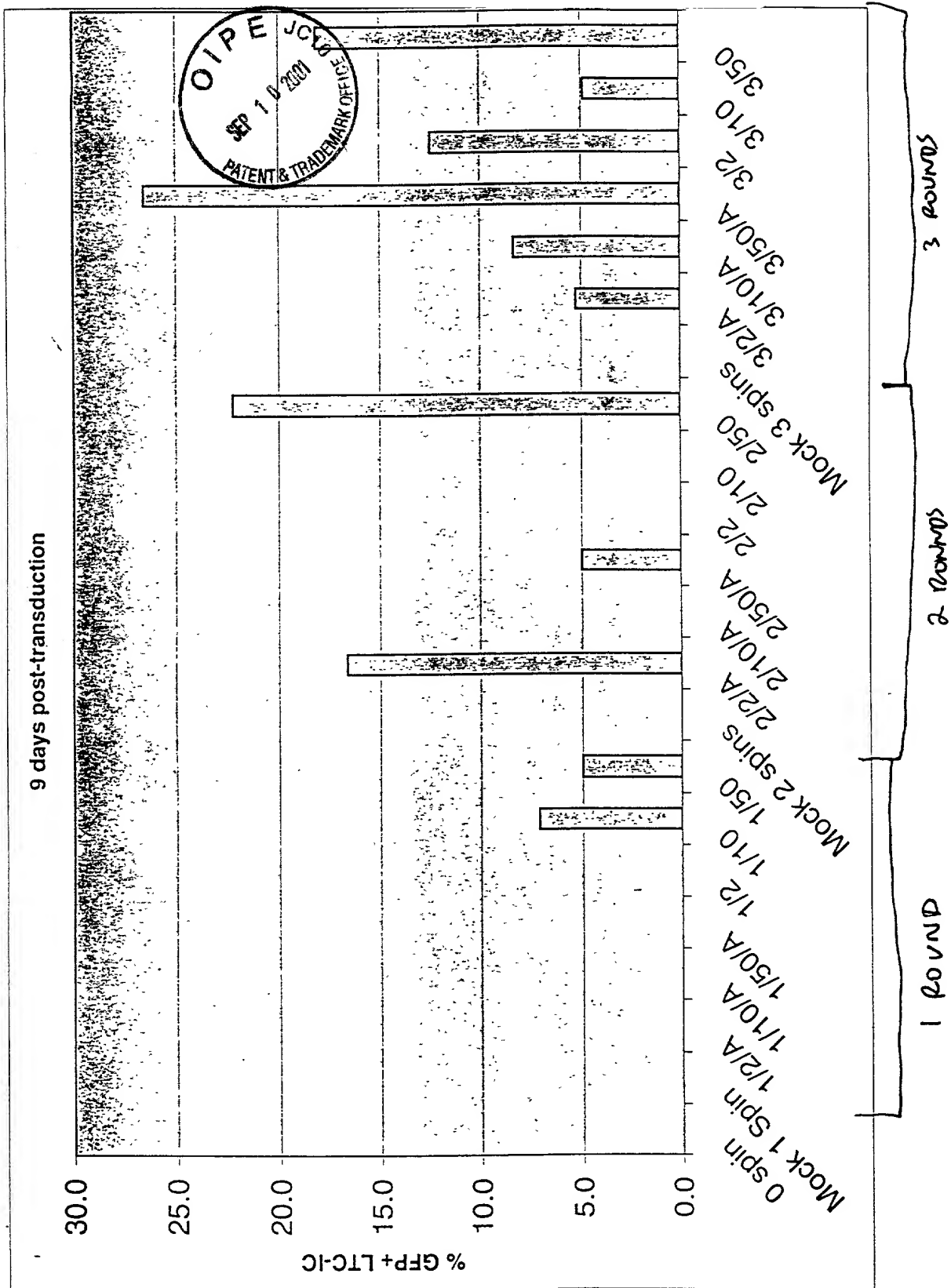


Fig 14A

Vsv-G, RD114 AND RD114-VSV-G CHIMERIA ENVELOPE PROTEINS

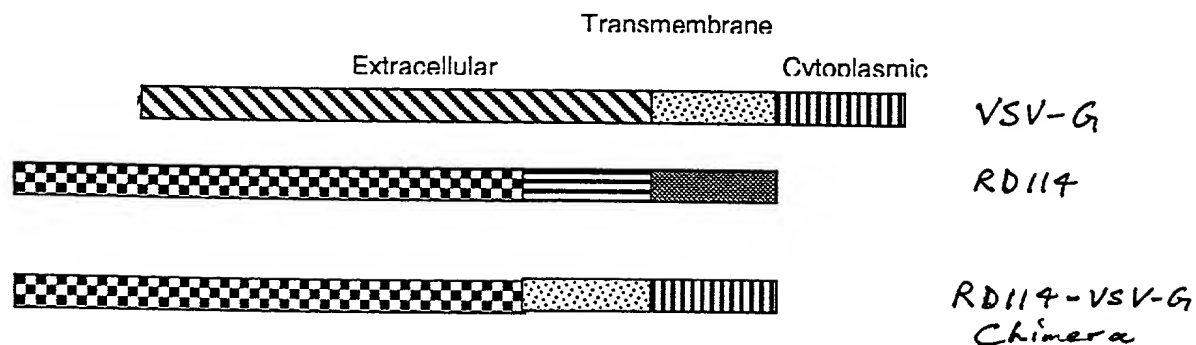
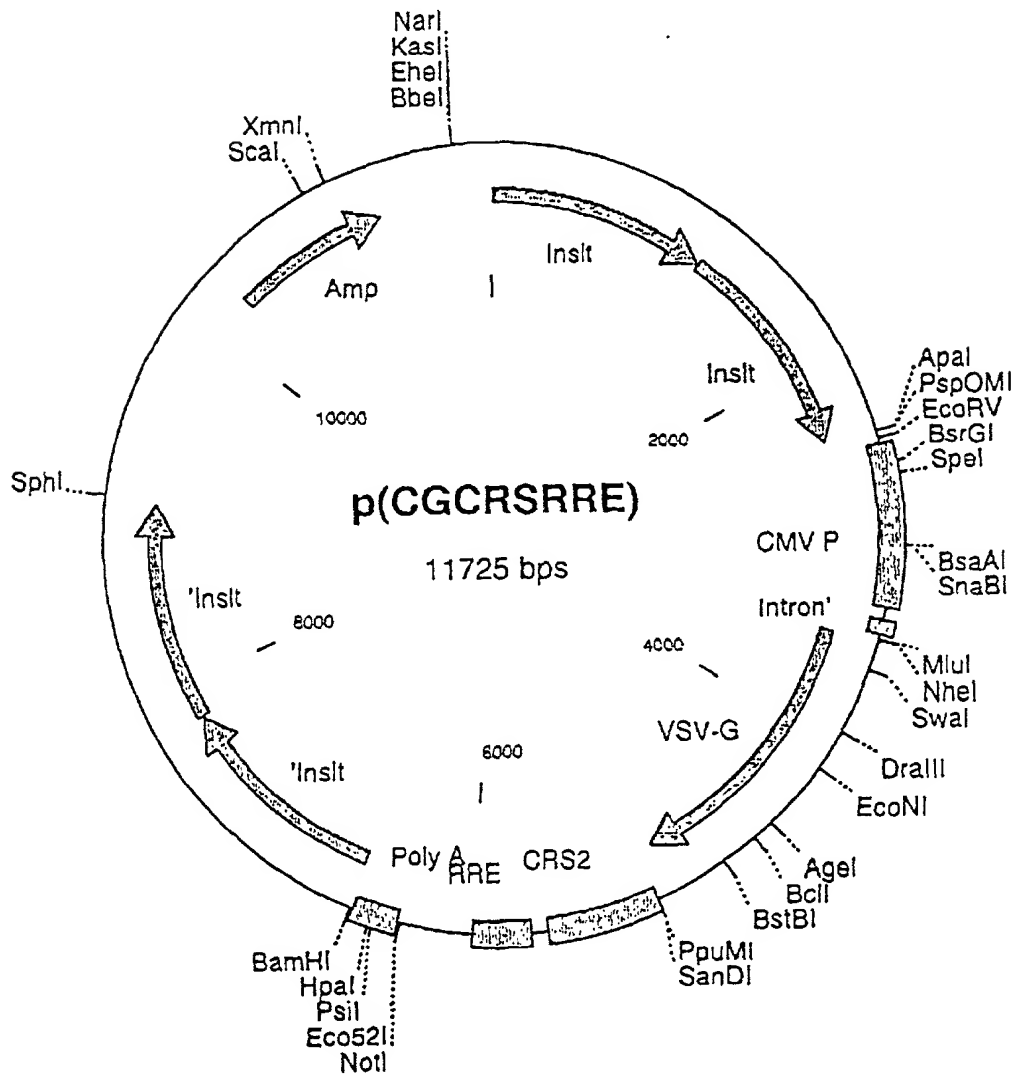


Fig 14B

Titers of RD114-pseudotyped HIV-1 vectors in HT1080

Envelopes	IU/ml
VSV G	3.5x10e6
Rabies virus G	1.6x10e6
RD114WT env	1.5x10e5
RD114E env	3.8x10e4

Fig 15A



09819401.091001

Fig 13E

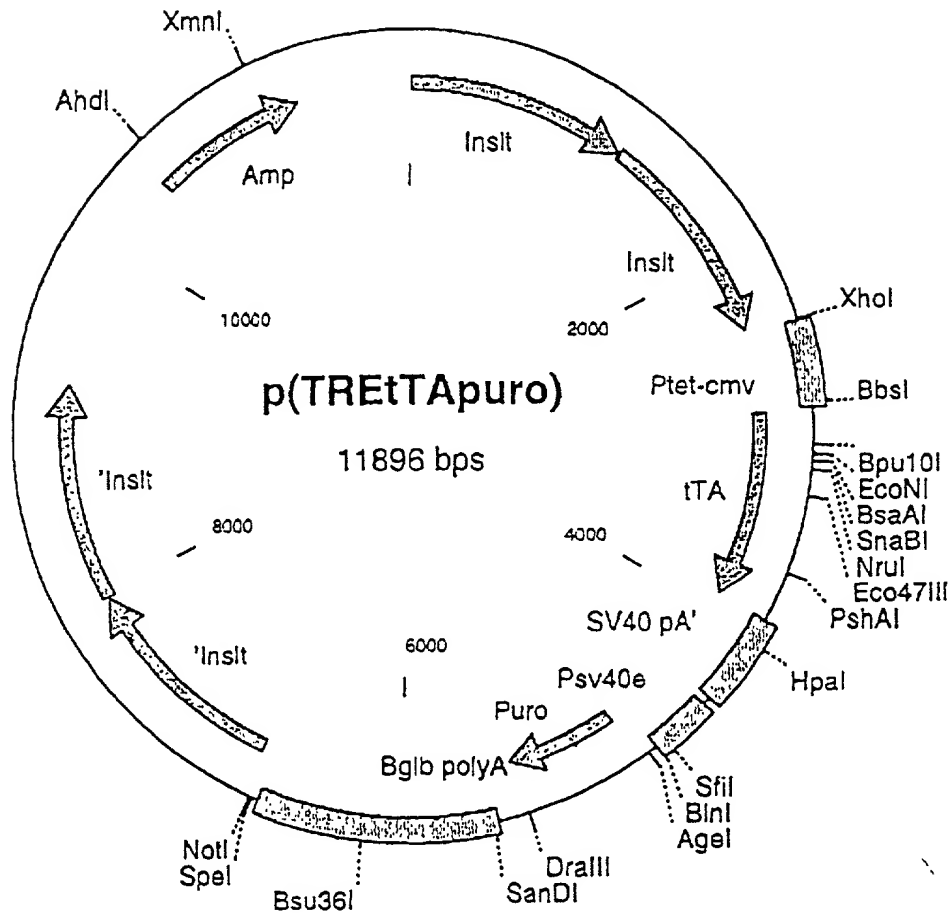
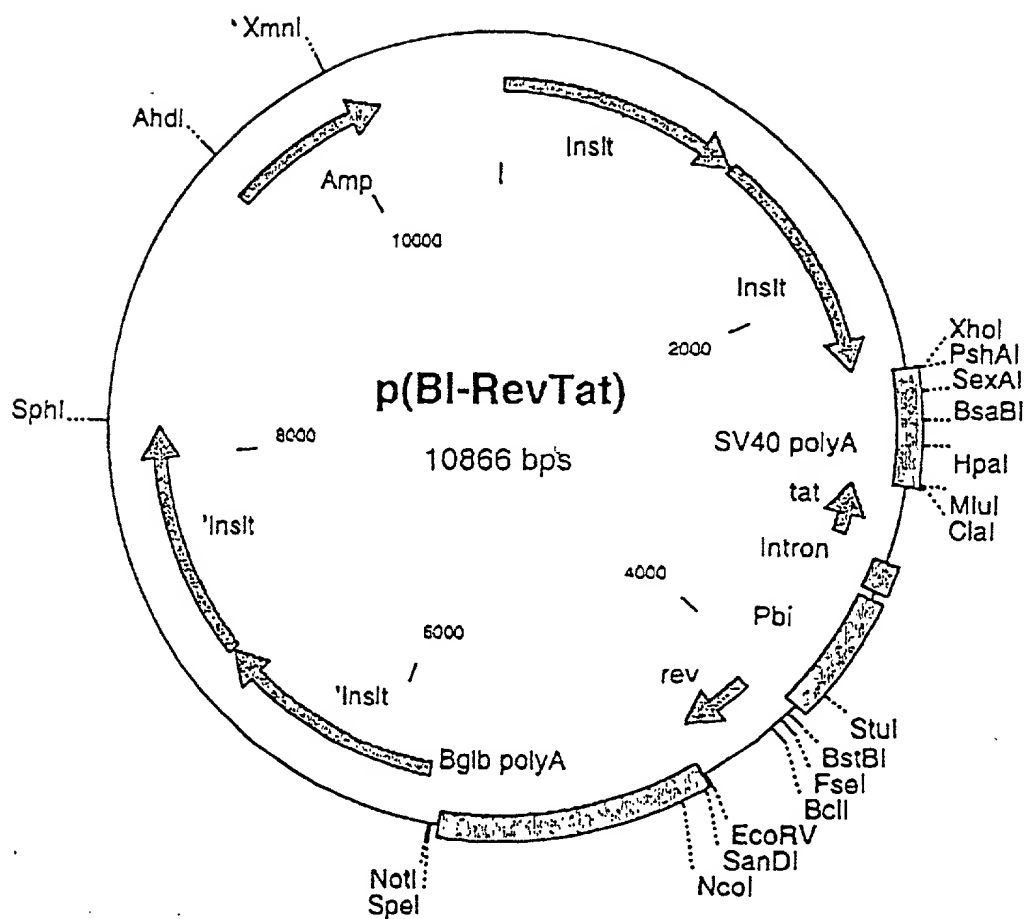
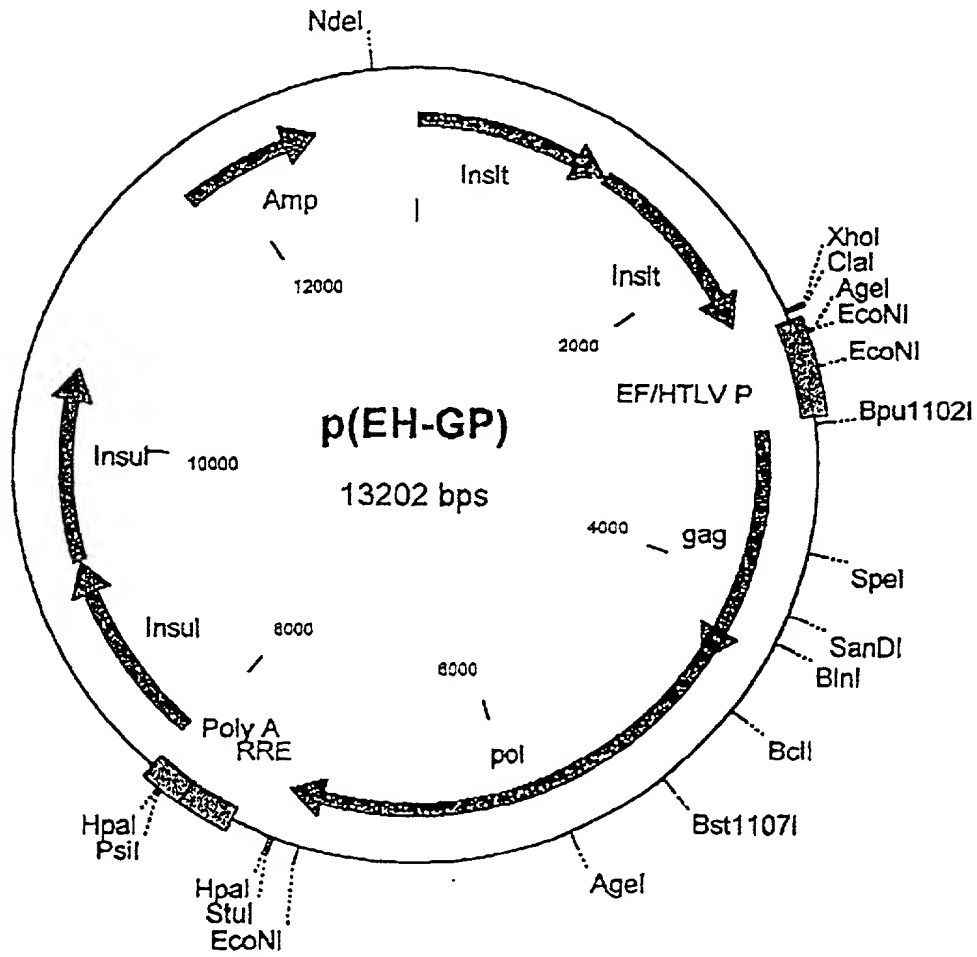


Fig 15C



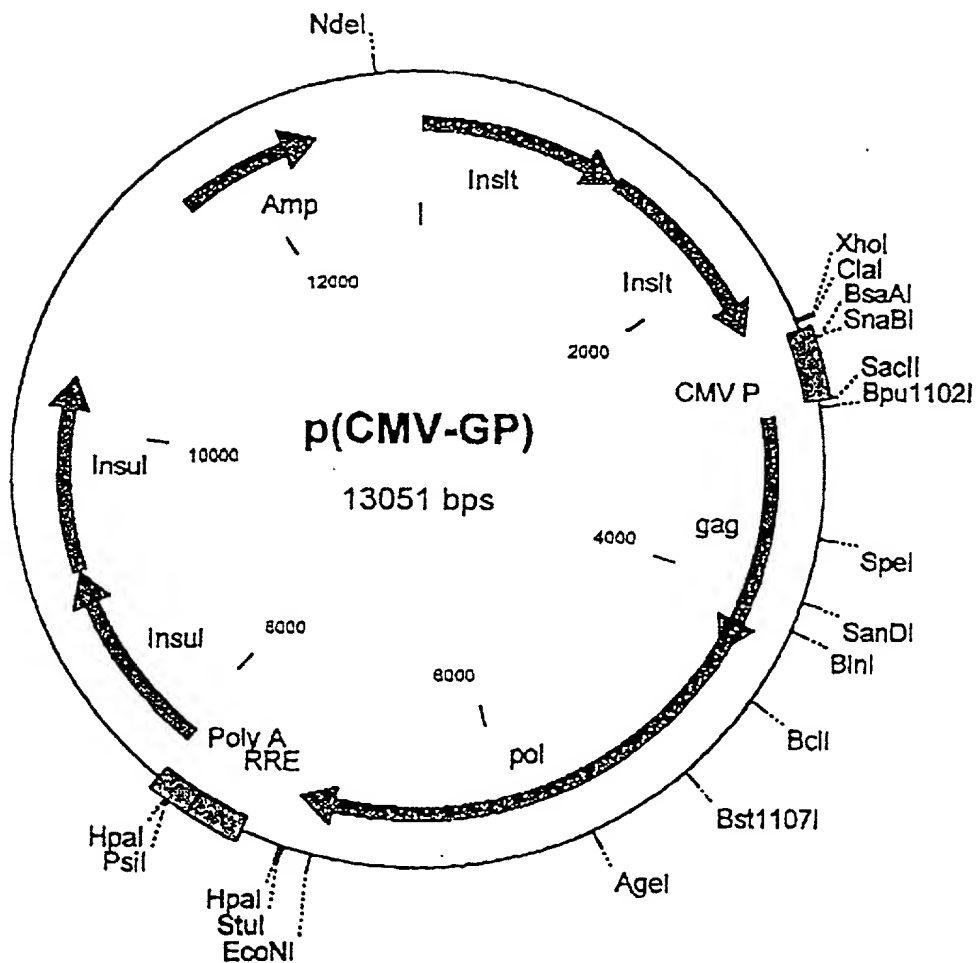
09819401.091001

Fig 15D



0919401.091001

Fig 15E



09819401.091001

Fig 15A

Rev dependent VSV-G constructs

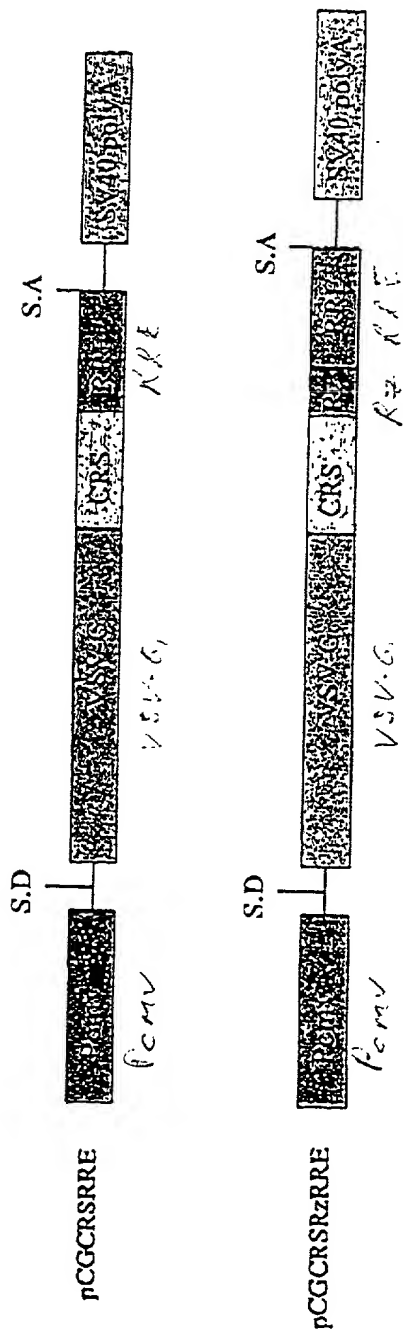
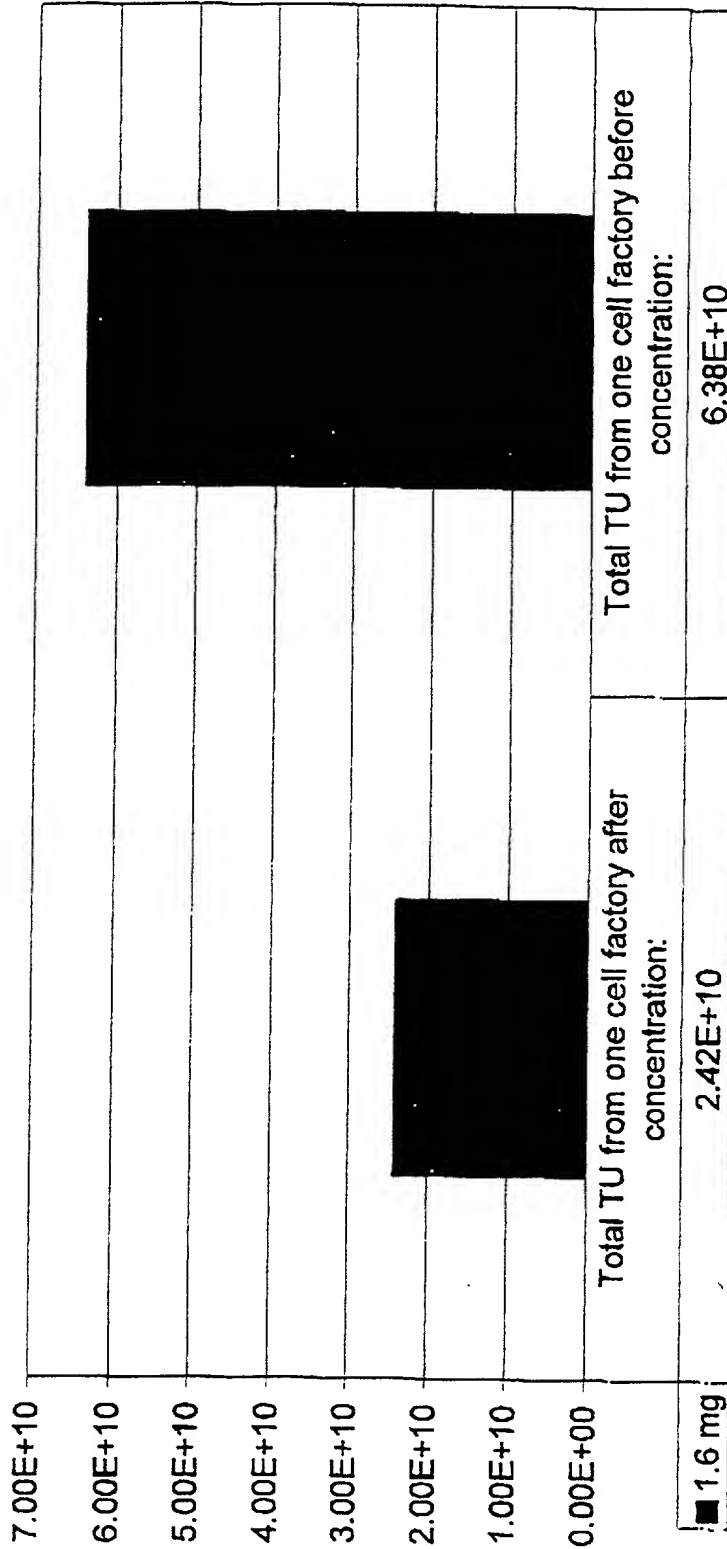


Figure 2

Yield of pN1(cPT)GFP Vectors per Cell Factory before and after Concentration in HeLa-tat Cells.

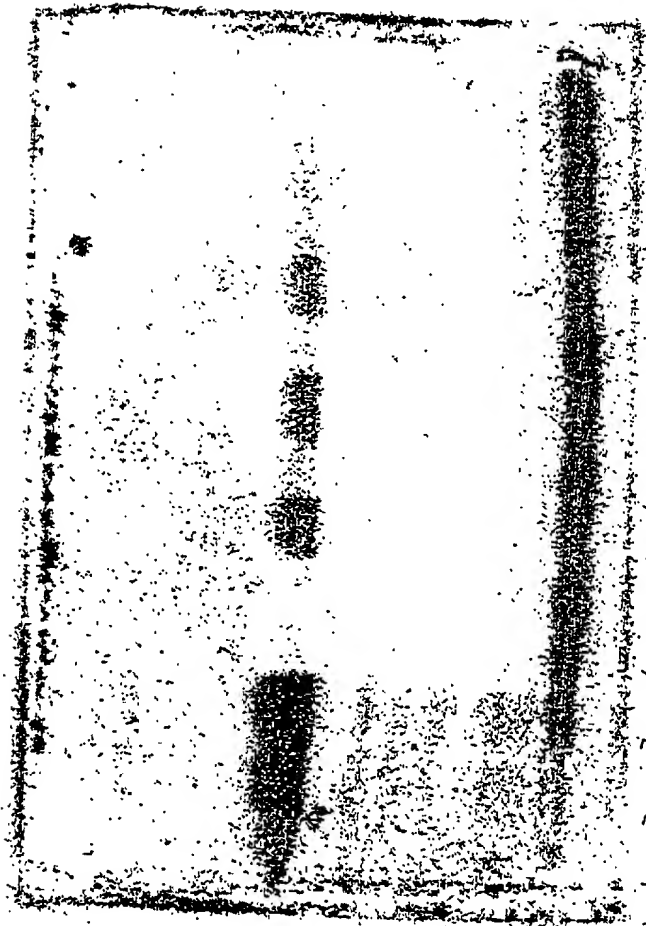


AFTER
CONCENTRATION

BEFORE
CONCENTRATION

Fig 16

1-19-17



TETRACYCLINE	+		+		+		+		+		+	
	1	2	3	4	5	6	7	8	9	10	11	12
	pCMV-Rev4		pCMV-Rev-4		pCMV-Rev-IM		pCMV-Rev-H		pCMV-Rev-IE		pCMV-Rev-2E	

293G

LANE

+ = pCMV-Rev

- = PCI

G = β -globin SD

IM = HIV-1 major SD

H = Hammerhead's SD Analog

IE = HIV-1 env SD

2E = HIV-2 env SD

REMOVES TETRACYCLINE
TO INDUCE EXPRESSION OF REV
THAT IS ~~REV~~ REV
DEPENDENT.

Influence of the Buffer on Vector Recovery after Storage for 3-5 Weeks at Different Temperatures

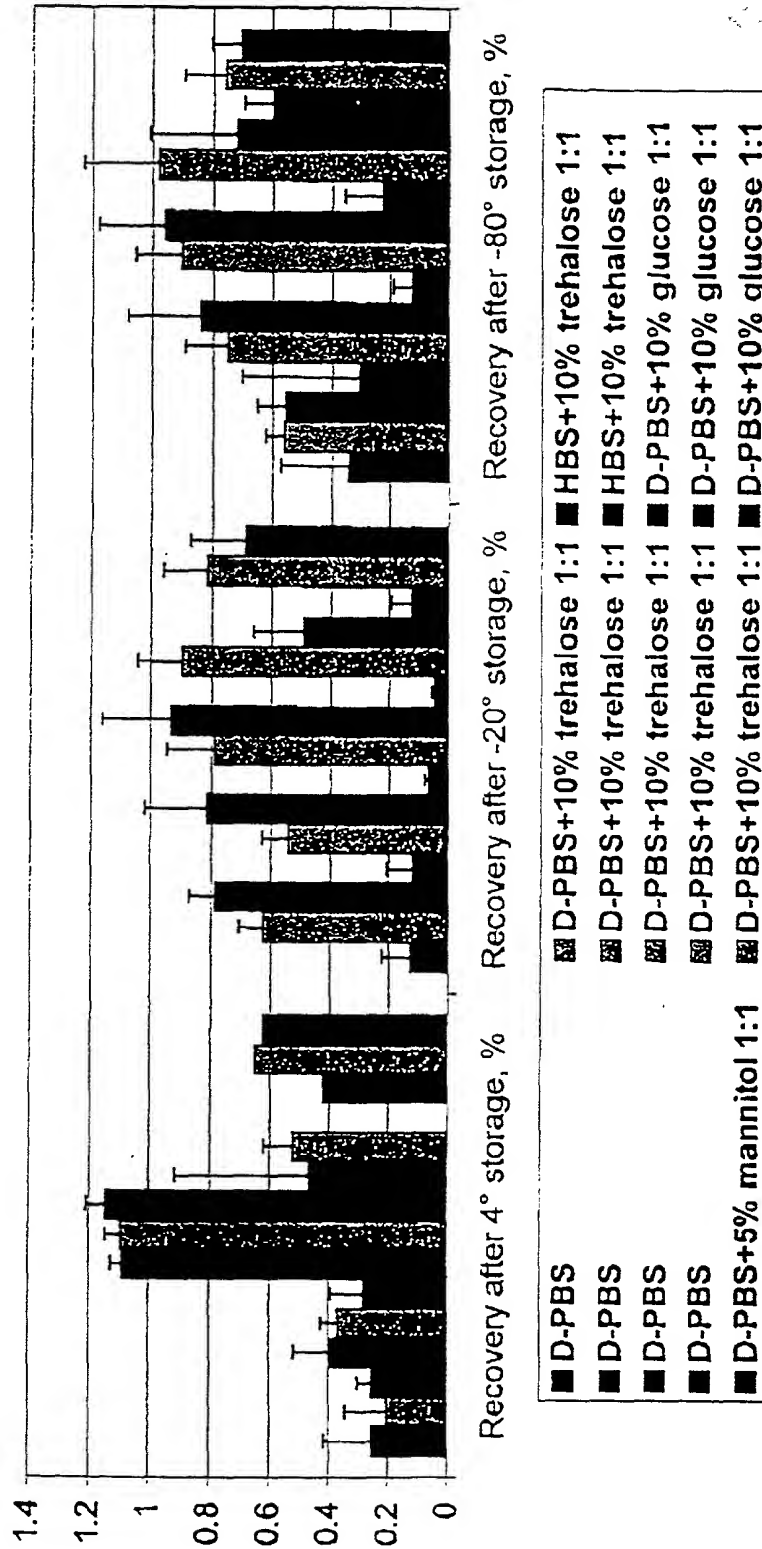


Figure 19

